THE WHOLE ART OF BANDAGING

By
THEKLA BOWSER

JOHN BALE MEDICAL PUBLICATIONS LIMITED
3-91 GREAT TITCHFIELD STREET LONDON W1

Price 11/- net

HINTS FOR HOSPITAL ORDERLIES

by

N. CORBET FLETCHER,
M.A., M.B., M.R.C.S.

This book has been written by special request to fill the need of those called up for service in Military Hospitals who require assistance in their new sphere of duty.

There are chapters on Duties, Care of the Ward, Care of Patients, and Care of Orderly, and an opening chapter on the relation of the Hospital Orderly to the R.A.M.C.

Price **9d.** Postage 2d.

John Bale Medical Publications Limited
83-91 GREAT TITCHFIELD STREET LONDON W 1
Phone: MUSEUM 2077 (3 lines)

THE WHOLE ART OF BANDAGING

BY

EKLA BOWSER

Fellow of the Institute of Journalists

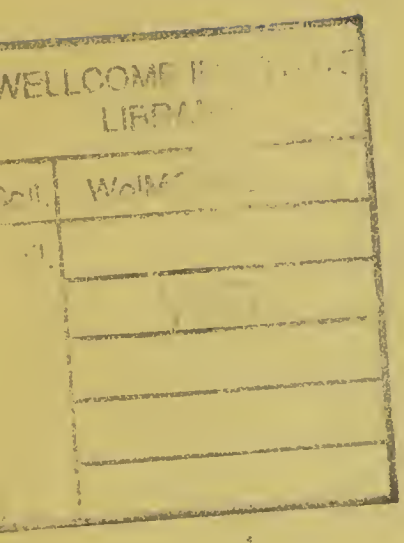
With an appreciation by

JAMES CANTLIE, M.A., M.B., F.R.C.S.

PROFUSELY ILLUSTRATED

JOHN BALE MEDICAL PUBLICATIONS LIMITED
83-91 GREAT TITCHFIELD STREET LONDON W1

First Published 1914



Published by
JOHN BALE MEDICAL PUBLICATIONS LIMITED
and printed by
JOHN BALE & STAPLES LIMITED
83-91 Great Titchfield Street London W 1

Miss Thekla Bowser is well known as an enthusiastic ambulance worker, and as one who has given her time and energies to the work of the St. John Ambulance Brigade as a nursing sister for many years.

The idea of bringing out a separate book on bandaging as practised in "First-aid" and "Home Nursing," in other words, the application of the Triangular and Roller bandage, will at once commend itself, and its appearance will be welcomed by all ambulance workers. Miss Bowser has taken great pains to ensure that the illustrations are correct, and Messrs. John Bale Medical Publications Limited have bestowed every care on the drawings.

At the present moment, when the care of the sick and wounded in war is uppermost in all our minds, Miss Bowser's book makes a timely appearance; but its usefulness will continue long after the deadly blast of actual war has blown over.

James Cantlie.

Harley Street,
London, W.

CONTENTS

PART I.—TRIANGULAR BANDAGING

THE WHOLE ART OF BANDAGING

Part I

Triangular Bandaging

INTRODUCTION

BANDAGING is one of those arts which seems extremely easy to the onlooker, but everyone who has had experience of it knows how apt one is to forget it in detail, even when it has been acquired in principle. The first-aider must make a point of being really excellent at bandaging, for it is upon the correct method of applying bandages that a large part of the utility of the ambulance nurse depends. A great deal of good, or a great deal of harm, can be done by a very slight difference being made in the way in which an injured part is bandaged, and a pupil who attends first-aid and nursing courses of lectures should realize from the outset that he or she must master the proper method of bandaging, before being considered in the least competent to deal with the injured.

It is with the idea of trying to make the instructions for bandaging very plain and clear that I have undertaken to write this manual, upon which Mr. James Cantlie has very kindly set his seal of approval. Without his name, the book would be worthless, but with it—a name which is known and honoured throughout the United Kingdom—the book may be the means of explaining away some of the difficulties which have been mentioned to me whilst occasionally helping to teach bandaging at

some of Mr. Cantlie's lectures. The first thing to understand is to realize the vast possibilities of the triangular bandage. A bandage is used for various purposes. It may be used to support the injured part, to fix splints into position, to stop bleeding by means of pressure, to protect wounds from the outer air, and to keep dressings in place. The triangular bandage is usually made of unbleached calico, although other materials can be used for it, and in the case of an arm-sling being worn, silk is very often employed. New calico or linen should be washed before being used, as the " dress " makes the material too stiff to be comfortable. The regulation size for a triangular bandage is made by cutting a piece of material 40 in. square, diagonally from point to point, thus making two " Esmarch " triangular bandages. Lay your bandage flat upon the table and look at our illustration (fig. 1). You will see that the lower edge is called the Base, the apex is called the Point, the margins are called the Sides, and the two points which come at the ends of the Base are called the Ends. Perhaps this sounds so simple that it seems unnecessary to explain it, but it is a good plan to remember these names exactly, because later on when I ask you to put the Point in a certain position you will know that I mean the Point and not one of the Ends. When teaching pupils I have endeavoured to impress it upon their minds that they should learn the correct terms in bandaging from the very beginning, because it makes much confusion of thought for them and for the teacher if they call things wrongly. The technical names in all Mr. Cantlie's books are as few as possible; in order that the necessary work be clearly understood, therefore, pupils should trv

to learn these few names from the very beginning. Sometimes people will call the Point the apex, which is certainly a far grander name, but perhaps not so easy to remember. Others will call the Base the lower border. I only mention this to help you in the event of your coming across these names; but throughout this book I shall adhere to the names which are printed against our pictured bandage.

As a last word I wish to emphasize the fact that in this little book there is *no intention of teaching First-Aid,* which must be learned from the recognized handbooks on that subject. This book on bandaging is meant to be a supplementary one to those already published on First-Aid and Home Nursing. In describing the application of bandages it has been impossible to avoid some references to First-Aid, but these are only made in order to demonstrate the reasons for applying bandages in certain ways. For instance, the application of a tourniquet is given merely to show *how to put it on,* and no attempt is made to explain the arrest of hæmorrhage. It has not been easy to keep bandaging apart from First-Aid as they are, necessarily, closely linked together, but I have tried to avoid all mention of the former, except on those points which arise out of bandaging.

The only purpose of this book is to give instruction on the various methods of applying the triangular and roller bandages. I have found it far more difficult than I anticipated, and I can only trust to the leniency of my critics and the kindness of my friends in not judging too harshly this little book, which I very humbly venture to hope may be of some use to those who are learning the art of bandaging.

THEKLA BOWSER.

CHAPTER I

FOLDING THE BANDAGE AND MAKING KNOTS

How to Fold the "Esmarch" Bandage

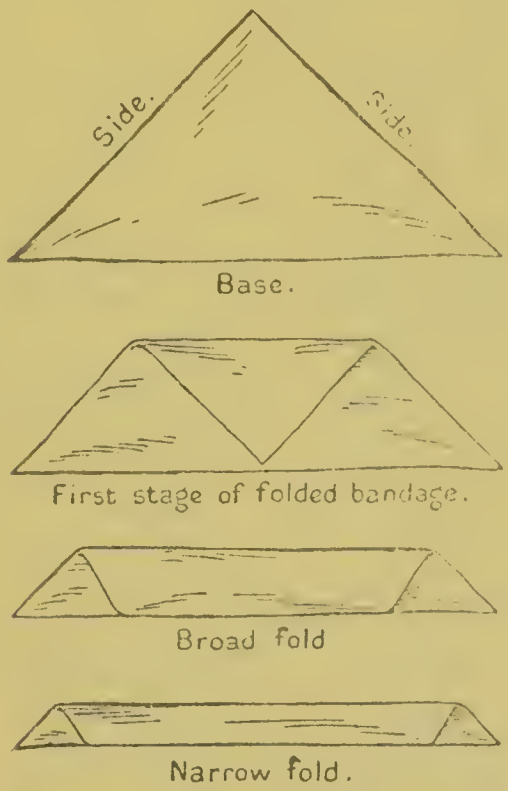
First of all you must learn how to fold the "Esmarch" bandage. Lay it flat on the table, bring the Point down to the centre of the Base, and then fold again; this is known as the broad-fold bandage; if you fold it again you make the narrow-fold bandage (fig. 1).

For the purpose of packing you can fold the bandage in two ways. When it is folded into a narrow bandage you can put the two ends to the centre and fold again; or you can lay your bandage flat, take the two Ends up to the Point, when it will be in a square; fold it in half and in half again twice over when you will have a neat oblong package. Fasten with a safety pin, as this will probably be required when the bandage is put into use.

Improvised Bandages

A very excellent imitation of the "Esmarch" bandage can be made in many ways by the ingenious first-aider. It is not exactly convenient to walk about with an "Esmarch" upon you, but once you have grapsed the principles of its use you will be able to convert very many ordinary things into an excellent bandage. A large pocket handkerchief folded into half, diagonally, will serve many purposes

well, and if you follow out the methods laid down here you will make a far more effective bandage than if you just fold up the handkerchief in a careless, unmethodical way. Of



HOW TO FOLD THE BANDAGE

FIG. 1

course it is a good thing if you can have your bandage absolutely clean, but very often this is impossible in a street accident, and you should remember that the essential thing to do is to cover the wound with whatever you can

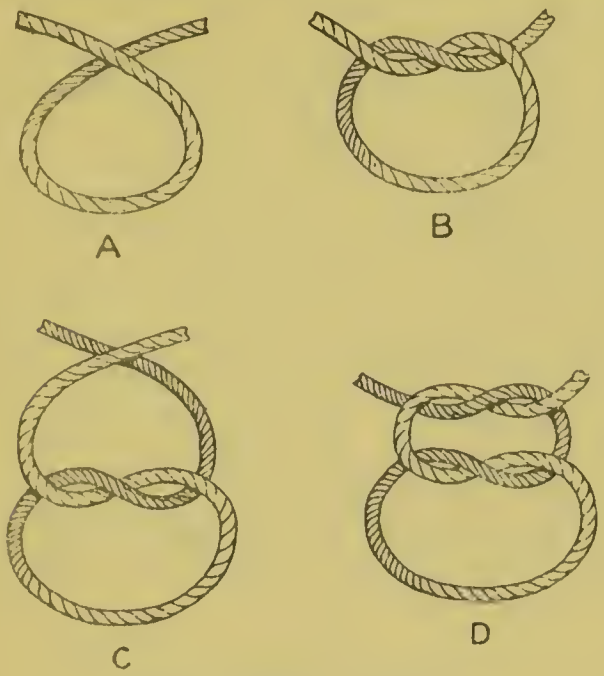
get hold of that is really clean. The *inside* of an envelope is generally one of the cleanest things that the ordinary person has about him. If this is placed next to the raw surface so that the wound is protected from the air, the injury can then be bandaged with anything that will make a good "Esmarch" without so much regard to its cleanliness.

I would not for one moment convey the idea that cleanliness is not to be greatly sought after when dealing with any sort of injury, but once having covered the wound with the very cleanest thing you can get hold of, the next thing for the first-aider to do is to put the injury up in such a way as to prevent further injury occurring, and to give the greatest comfort and support to the patient. These are the points to remember in improvising bandages. In the street a man's or boy's braces may be of very great use, and a neck-tie, a belt of any kind, a scarf, and even a petticoat torn into shreds may mean that a fellow creature is saved a great deal of suffering and possibly from permanent disablement. Nothing further need be said upon the art of improvisation, as the first-aider who is really keen on the work will very soon see the wide possibilities which exist for the practice of this art, even in the most unlikely and apparently unfruitful surroundings.

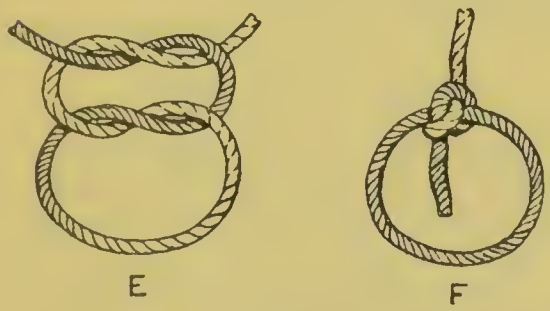
Knots

A very important part of bandaging is to always use a reef knot, because the more you pull on this knot, the firmer it will become. I think the illustrations (fig. 2) will show very clearly how to tie a reef knot. Stand with a narrow-fold bandage in your hands, one hand

being under either of the ends. Cross the right hand over the left hand, and pass the right end



THE REEF KNOT



THE GRANNY KNOT

FIG. 2

over and under, making a single tie, now cross your left end over the right end, passing it

through the loop so that when you pull it tightly you have formed a knot, the ends of which lie alongside of the bandage. This is the proof that the knot is a true "reef." The "granny" knot always has its ends pointing in the opposite direction to the bandage. The whole secret of tying a reef knot is to tie the right end over the left, and the left over the right, or reverse it, and first tie the left end over the right, and then the right end over the left. It does not matter which way you do it, but from personal experience I recommend all pupils to make up their minds as to which way they will tie their knots, and adhere to it. If you sometimes begin with the right end and sometimes with the left end you will very often find that after all your endeavours you have only succeeded in making a "granny" (diagrams E and F). To practise making reef knots you should put a bandage round the back bar of a chair or some such object and tie the ends again and again until you can do them rapidly as well as correctly. A reef knot is sometimes known as a sailor's knot; they are precisely the same thing.

Points to Remember

There are a few outstanding points to be remembered in applying the triangular bandage. In putting on bandages of any kind the injured part should be moved as little as possible. The patient should be made as comfortable as circumstances will permit; the knot should never be placed where the patient would lie upon it, nor should it be put in such a position that it has the full weight of a limb dragging upon it. That is why the knot is always put on the injured side in the large and

the small arm-sling. In the St. John arm-sling, the knot is put on the *uninjured* side, but the sling in that case is of such a nature that the weight does not drag upon the knot. The best position for the sling knot is just a little towards the front of the side-back of the neck. Great care should be taken that the bandages are put on neatly, and very often this can be better effected by a fold or temporary hem being made at the Base of the bandage. In applying the bandage to a child's arm it is sometimes a good plan to halve it by bringing the two Ends together and then folding it into a broad or narrow-fold bandage. Students are apt to confuse the outer and inner sides of the arms. Stand upright with your arms hanging down and the palms in front so that the backs of the hands will be at the back. Thus you will see that the little-finger side of the hands is the inner side.

CHAPTER II

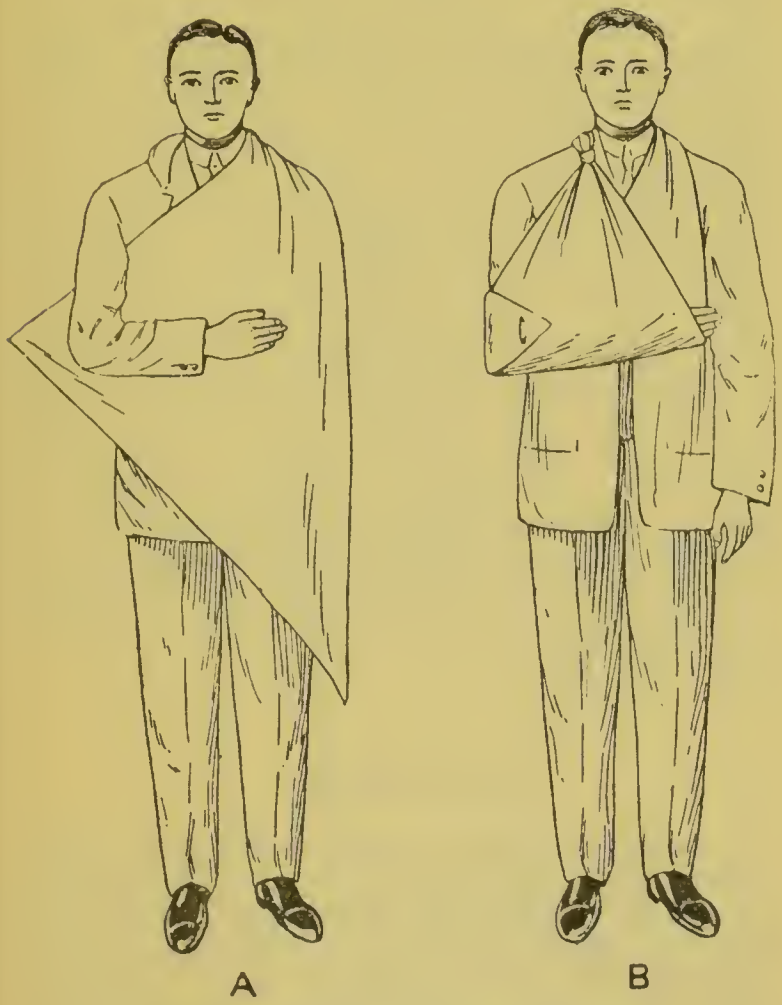
SLINGS

As arm-slings are certainly the most often required bandage we will deal with them first. The object of a sling is to give support to the injured limb, and a great deal of comfort or discomfort can be got out of them. Nothing can be more miserable for the unfortunate wearer than a sling which is badly put on, but, on the other hand, a well-arranged sling is a very real boon to the sufferer. This should always be borne in mind by the first-aider, and it is a good plan to ask the patient if it is comfortable before you finally tuck in the ends of your knot. That reminds me to say that you must *always* tuck in the ends of your bandage so as to make it absolutely tidy. Both for examination purposes and in practical use you will find it is essential that the ends of the bandage are tucked in, not superficially, but so deftly that they will not easily become displaced.

Large Arm-sling

The sketch (fig. 3) shows very plainly the processes of putting on a large arm-sling. Hold the bandage up in front of your patient, and you must remember that in all bandaging you stand opposite the part to be bandaged. Put one End of the bandage over the shoulder of the uninjured side, carrying it round so that it lies upon the other shoulder. Flex the arm across

the body so that the elbow lies just above the point of the bandage. Now carry the lower



THE LARGE ARM-SLING

FIG. 3

End of the bandage up to the shoulder of the injured side and tie there in a reef knot, tucking

the ends in neatly. Finally, bring the Point of the bandage round over the front of the elbow, tucking in neatly any of the superfluous material and pin the Point in front with one or two safety-pins. You must always expose the nails of the injured hand in order to be able to assure yourself that the circulation is not impeded. If the nails are bluish in colour you may know that something is wrong with the circulation. Another method of testing this is to press the finger tips and notice whether the blood comes back quickly to the part that has been pressed. If it does not return immediately you may know that the circulation is wrong. Should you find that the circulation is impeded, you must alter your bandage until it is corrected. The sling should not be allowed to ride up in the neck at the back, as this makes it exceedingly uncomfortable, and very often it is a good plan to fasten it well down by means of a safety-pin. The large arm-sling is used for injuries to the fore-arm, elbow and ribs.

Small Arm-sling

A small arm-sling is made by placing a broad-fold bandage with one End over the shoulder on the uninjured side, bringing it round the neck to meet the other End, which you bring up over the wrist of the injured arm. Our illustration (fig. 4) shows this so plainly that further explanation is unnecessary. A small arm-sling is used for fractured humerus, which is the large bone in the arm. Do not confuse the arm with the fore-arm. The arm is the part from the shoulder to the elbow, and from the elbow to the wrist is the fore-arm.

St. John Arm-sling

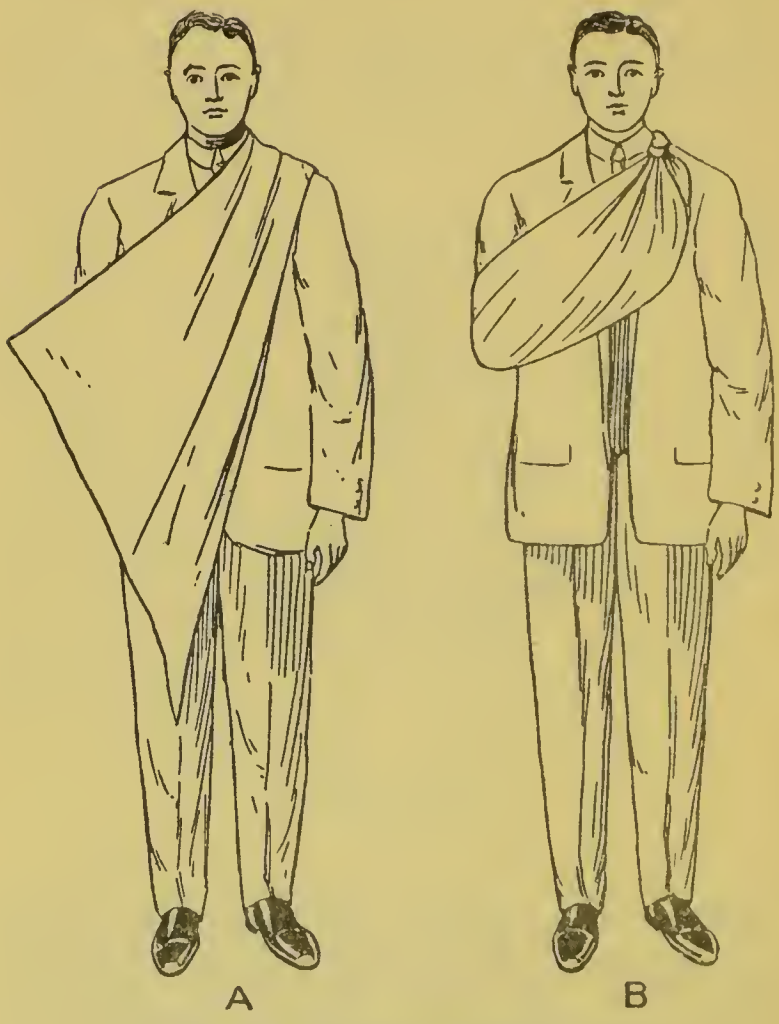
The St. John arm-sling (fig. 5) is one of the most comfortable slings that has ever been invented, but until the pupil gets a thorough grasp of how to apply it, it is apt to be thought one of considerable difficulty. An easy way to remember the difference between the St.

THE SMALL ARM-SLING

FIG. 4

John arm-sling and the large arm-sling is that the one has the Point of the bandage *under* the flexed elbow, and the other (the St. John) has the Point of the bandage *over* the flexed elbow. In applying the St. John arm-sling, put one End of your bandage over the shoulder of the uninjured side, the entire bandage hanging down over the front of the body of the patient. Suppose that we are putting a sling on the right arm, the Point of the bandage will be over the

right elbow, and the upper End of the bandage will be lying over the left shoulder. Now take



THE ST. JOHN ARM-SLING

FIG. 5

the lower End in your left hand and carry it back, bringing the Base of the bandage up and

under the flexed arm. Tie the two ends on the left shoulder a little to the side of the neck, making the knot tight enough to bring the hand high up on the breast of the patient: support it in the fold which you have made in the Base of the bandage. You can easily arrange it so that the entire hand is supported, or the finger-tips are left free. This is a matter to be decided upon by the nature of the injury. Bring the Point of your bandage over the elbow, and fasten it with a safety-pin at the back or front as may be best. If necessary, undo the knot on the shoulder and re-tie it so as to get the bandage taut and comfortable. The St. John arm-sling is used for three injuries in particular and for several minor ones. These are fractured clavicle (collar-bone), fractured scapula (shoulder-blade), and injuries to, and particularly hæmorrhage of, the hand.

In our illustration of the St. John arm-sling, we show it in the process of application and when it is complete.

Emergency Slings

If you have no material with you out of which you can make a sling, there are two ways of using the ordinary coat for the purpose. In fig. 6 we show the Sleeve Emergency sling. For this you simply undo the inner seam of the coat-sleeve up to within three or four inches of the arm-pit. Now turn the sleeve back and pin the wrist-band to the coat, as will be seen in our sketch, arranging it so that the arm finds a comfortable support by it.

Another kind of Emergency sling (fig. 7) can be made by the front of the coat being turned up and pinned high on the chest, or

IMPROVISED SLING

FIG. 6

COAT-SLING

FIG. 7

on the shoulder, as the case may be. If it is a coat which has no opening at the back or sides it may be necessary to rip up the seam under the arm, but by deftly folding the coat this can very often be entirely avoided, and a very effective sling made by pulling the front of the coat up into position.

Another easy way of giving support to an injured hand or arm is to pin the coat-sleeve to the coat.

CHAPTER III

THE HEAD

It is very important to remember when applying bandages to the head that they are carried well under the occipital bone at the back, as this makes a kind of natural ledge to keep the bandage in position. Be careful to make all your bandages very neat, but especially those on the head, as it is intensely irritating to have an untidy bandage put on a head or facial injury.

Scalp Bandage

Make a fold about 2 in. deep at the base of your bandage and place the centre of this low down on the forehead, so that the hem almost touches the eyebrows (fig. 8). Carry the Ends of the bandage behind the ears and pass them over the Point (which is hanging down over the nape of the neck), and bring them again to the forehead, where they are knotted low down. Pull the Point of your bandage taut, and bring it sharply up on to the crown of the head, where it is fastened with a safety-pin.

Bandage for Temporal Artery

This bandage (fig. 9) is for an injury to the temporal artery, which means that it is bleeding. I am not going to enter into the methods of digital pressure here, as that has nothing to do with bandaging, but hæmorrhage is very

constantly stopped by means of a pad and bandage. In this case you would use anything that you could get hold of for the pad. A

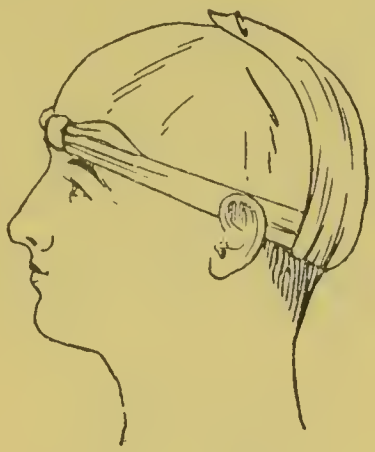


FIG. 8

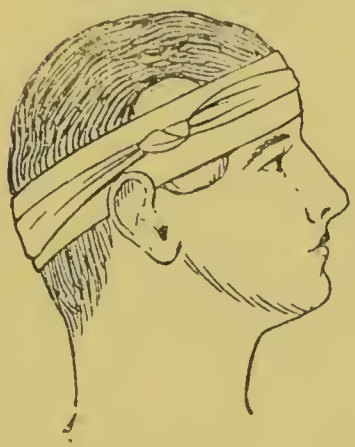


FIG. 9

handkerchief rolled up into a hard ball or any hard substance that you may have about you will do, but you should endeavour to have

something clean to put over the actual wound before you apply the pad. Make a narrow-fold bandage, put the centre of it immediately over the pad that you have placed on the bleeding point, pass your bandage round the head and back again, knotting it immediately upon the pad very firmly and securely. This bandage can be applied in the same way to any part of the forehead, but, of course, when there is no arterial bleeding the pad can be omitted and a suitable dressing substituted.

Another method of exerting pressure on the temporal artery is to place a pad on the bleed-

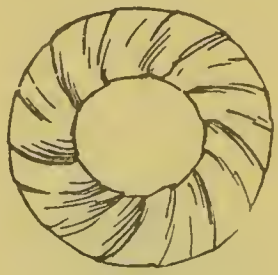


FIG. 10

ing point. Place the centre of your narrow-fold bandage on the opposite side of the head. Bring the Ends round taking a single twist immediately over the pad, and then carry one End over the crown of the head and one End well under the chin, and knot them on the opposite side.

If you have nothing at hand of which to make a pad you can tie a knot in the centre of a narrow-fold bandage and use the knot as a pad.

Ring-pad.—In the case of an injury being suspected to the bony surface of the scalp, it is of

importance that you avoid all pressure on that spot, and for this purpose you must make what is known as a ring-pad (fig. 10). Take a narrow-fold bandage, form it into a ring, and twist the free end over and over and over again until it has made a pad, such as is shown in our picture. This is placed over the seat of the fracture, so that the opening in the ring-pad will be immediately over the injury, and the pad will protect the part from all pressure. An exceedingly important point in the making of a ring-pad is to remember to make it sufficiently large in size. No ring-pad should be less than four inches in diameter, and usually should be larger than this. Of course, in the case of a punctured wound quite a small pad will be sufficient.

Bandage for Eye

We give no illustration of this as it is a very simple one, although there is a considerable knack in putting it on so that it is both comfortable and effective. Make a narrow-fold bandage, place the centre of it slant-wise across the injured eye, and knot the ends together wherever most convenient. If your ends are long enough, it is a good plan to bring them back and tie immediately over the eye, taking care not to let the knot hurt the eyeball. In the case of a foreign substance being in the eye a pad should be placed on the closed eyelid, and the bandage drawn firmly across it. The knot must not be sufficiently tight to drive the foreign body further into the eyeball, but enough pressure must be exerted to keep the eyeball still. This same bandage can be applied to wounds in any part of the face if a little common sense is used when putting it on.

Jaw Bandage

There are several different bandages which can be put on either a fractured jaw or a dislocated jaw that has been reduced (fig. 11). The first one we show in its two stages. Use a narrow-fold bandage. Place the palm of the hand below the injured bone and press it gently against the upper jaw; that is, in the case of

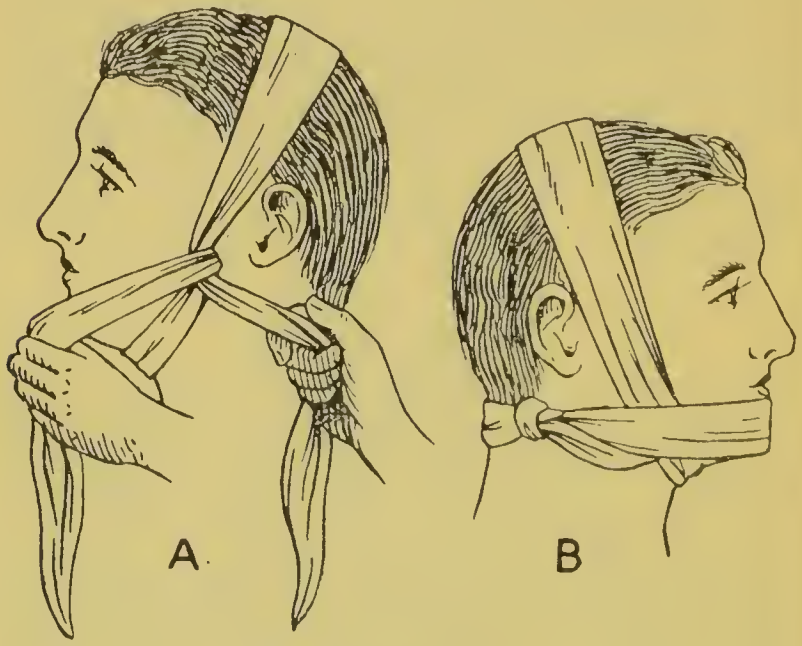


FIG. 11

fracture, but in the case of dislocation you will not be able to do anything with it, but will have to leave it in the position in which you find it. Apply the centre of your narrow bandage immediately under the chin, carry the left end over the head, keeping it well back on the crown. Keep this end in front of the end which has been passed under the chin,

as you will see is shown in the illustration (fig. 11A). Now bring the end which was under the chin across the chin, so that it catches the tip of the chin and holds it firmly. Knot the ends of the bandage on the opposite side of the jaw. Be very careful that neither the twist of the bandage nor the knot comes over the seat of the injury.

Another method (fig. 12) of applying a bandage for a fractured jaw is to cut a slit in

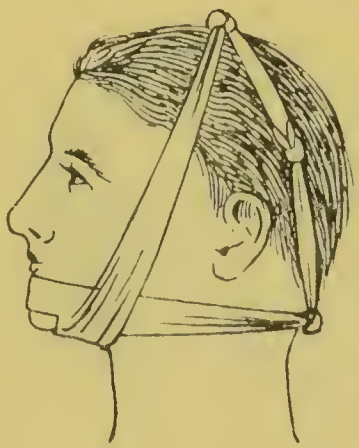


FIG. 12

a broad piece of bandage, placing the slit under the chin and tearing the ends of the bandage into two strips to within a few inches of the chin. Tie the lower ends on the top of the head, the upper ends at the back of the neck, and then tie up the ends across the head to keep the bandage firmly in position.

Dressing of the Head

A very excellent bandage which is of great use for all sorts of scalp and face wounds is

made by taking a piece of calico which is about 5 in. in width and 13 in. in length. Slit up either side of the ends of the bandage to within about 3 in. of the centre, so that you have a small square of bandage with four ends to it. In the case of a fractured jaw, place this square underneath the chin, tie the upper ends round the head under the occipital bone, tie the lower ends on the crown of the head, and then, instead of tucking the ends in, tie

FIG. 13

them to the two other ends, which you can bring up from the back of the head. This bandage can also be used most suitably for keeping a dressing on the forehead, as will be seen in the illustration (fig. 13). This same bandage can be used in a great many ways on the head, as one may readily learn for oneself. For instance, if you have to bandage a wound on the crown of the head, you should place the little square of calico immediately over the dressing and draw the

four ends downwards, bringing the back ends forwards under the chin and the front ends backwards under the occipital bone. If the wound is on the back of the head place the centre of your bandage over the dressing, bring the lower ends round the head and tie on the forehead, and take the front ends down and tie under the chin. This makes an exceedingly neat bandage, and will keep all dressings absolutely in position, if correctly and neatly applied.

Cut Throat

In the event of having to attend to a cut throat, you must put on a bandage which will hold the head securely down on to the chest, as the cut is almost certain to be a transverse one, and by pushing the chin down into the chest you help to close the wound and stop the flow of blood to some extent. Use the four-tailed bandage which I have shown you for keeping the dressing on the scalp (fig. 13), but tie the two forward ends well down at the back of the neck, and bring the two back ends forward over the shoulders, and knot them to a circular bandage which you have previously tied round the body. If you knot the left end on to the bandage under the left breast and the right end under the right breast, you will find that you can hold the head down very firmly so that the chin touches the chest.

CHAPTER IV

THE UPPER EXTREMITIES

The general principles that must be remembered when bandaging the limbs are that they must be bandaged upwards, and that the knots should never be allowed to be on the seat of the injury. When splints are used the knots must always, without exception, be tied over the splints. In applying splints you must be careful to put them on the limb in a perfectly flat manner; that is, a splint that is put on the arm must lie flatly against the inner side, and another splint be put exactly opposite it on the outer side. The same thing applies to putting splints on the leg. They must be placed either immediately behind the calf and heel (when it is known as a back splint), or on either side of the leg. If splints are put on over clothing they need not be padded, but a pad of some sort should be placed at the top and at the bottom of each splint where they are very likely to hurt the skin. This especially applies to a splint that is put on the arm, and may injure the arm-pit if pushed up too far without proper padding, and to the leg splint at the ankle if it is not long enough to project beyond the foot. The edge of the splint in that case may rub the back of the ankle and produce a nasty sore. The first-aider who is really well trained will remember all these small points, for however well a splint is applied, neglect of these principles may convert a "simple" fracture into a compound one. For if the splint is put on

carelessly so that it girts at any particular point a sore may be produced, thus making another injury whilst treating the first one. To pad a splint you can use anything that is soft, and a triangular bandage made into a narrow-fold bandage and laid upon a splint acts very well as a slight padding.

Dressing on the Shoulder

Take a triangular bandage and make a fold at the Base (fig. 14); place the centre of the Base

FIG. 14

against the centre of the arm with the Point lying on the shoulder, the actual point reaching to just below the ear. Carry the Ends of the bandage round the back of the arm and knot them in the front. Now put on a small arm-sling, and if the injury to the top of the arm or to the shoulder is very sensitive to the

touch, it would be as well in this case to place the knot of the arm-sling on the uninjured side. In the ordinary way, however, you should place the knot on the injured side, making the sling sufficiently taut to give the hand real support. The end of the sling has been carried *over* the point of the other bandage, and when the sling is complete you must pull the Point upwards, so that it is taut, and then

FIG. 15

draw it down over the bit of sling or knot (as the case may be), and secure with a safety-pin. In the sketch we show the method very clearly, the Point being left unsecured, but the dotted line indicates where it will come when pinned.

Hæmorrhage from the Axilla

The axillary artery lies in the centre of the arm-pit, and hæmorrhage from it can be arrested by placing a pad about the size of a billiard ball in the arm-pit (fig. 15). Under

this put a narrow-fold bandage, draw the ends upwards, cross over the shoulder and round the body; tie them off on the uninjured side where the patient will not lie on the knot. In the case of a big man it may be necessary to take a broad-fold bandage in order to keep your pad firmly in position. This bandage must be put on very tightly or it will be useless. The arm must have been flexed from the very beginning, and you now place a

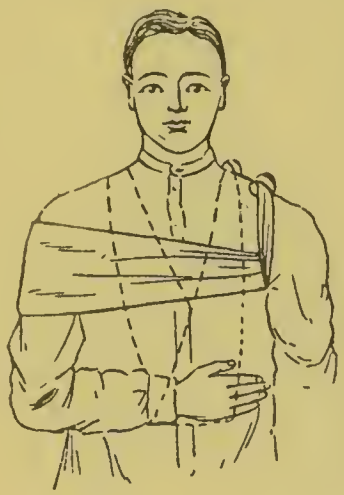


FIG. 16

broad-fold bandage with the centre just above the flexed elbow, tying it off on the left side of the front of the body. Thus by drawing the arm backwards closely against the body you form a leverage which is very useful for arresting the hæmorrhage.

Fracture of the Upper Part of the Arm (Humerus)

When the upper part of the humerus is fractured it is inadvisable to use splints (fig. 16).

Flex the arm, place a broad-fold bandage with the centre over the seat of the injury. Carry the ends round the body, crossing them under the other arm, and tie on the uninjured shoulder. Apply a small arm-sling.

Fracture of the Shaft of the Arm Bone

This injury must be put in splints, and you can use two, three or four according to their width. In the illustration (fig. 17) we show the

FIG. 17

arm put up with two flat splints, one being placed on the inner side of the arm and one on the outer. Take care to keep them very flat against the arm and not allow the inner one to push into the arm-pit. The second splint is put on the flat outer surface of the arm, and you must remember to flex the elbow before you begin to apply your splints. The splints are kept in position by two narrow-fold bandages, the knots always

being tied on the splints, and above and below the injury. A small arm-sling is applied, with the knot of the sling on the injured side. If you have only very narrow splints at hand you may apply four to the arm, but take care to place the first one inside the arm, keeping it perfectly flat, the second one on the outer part of the arm, and the other two in front and behind. Splints may be made of newspapers rolled tightly, bits of firewood, flat rulers, or other articles. In the case of being able to get only articles that are too long for the arm they can still be used inside the arm and on the flat outer surface, as the long ends can hang down without doing any harm and without being in the way of the sling, as it is a small arm-sling one must use. The reason why a small arm-sling is used for fractures of the humerus is that the injured bone may be allowed to drop. If you put on a large arm-sling and push the elbow upwards you will be likely to do great injury to the fractured ends of the bones by causing them to override each other.

Fracture of Fore-arm

First flex the elbow, with thumb upwards and the palm directed towards the chest. Put up in splints as you have already learned to do for fractured humerus, being careful not to push the inner splint into the elbow-joint. Tie your bandages above and below seat of fracture. Fix the splints at both ends and apply a large arm-sling.

Arresting Hæmorrhage by Tourniquet on Brachial Artery

Place a pad over the brachial artery which runs on the inner side of the arm; the best

point for pressure is about half-way between the elbow and the arm-pit (fig. 18). Place a pad on the spot and a narrow-fold bandage over this, tie on the outer side of the arm. After you have made a single tie place across it a short, strong stick as will be seen in our illustration (fig. 18A). Now complete your reef knot, finishing it with another tie to make it

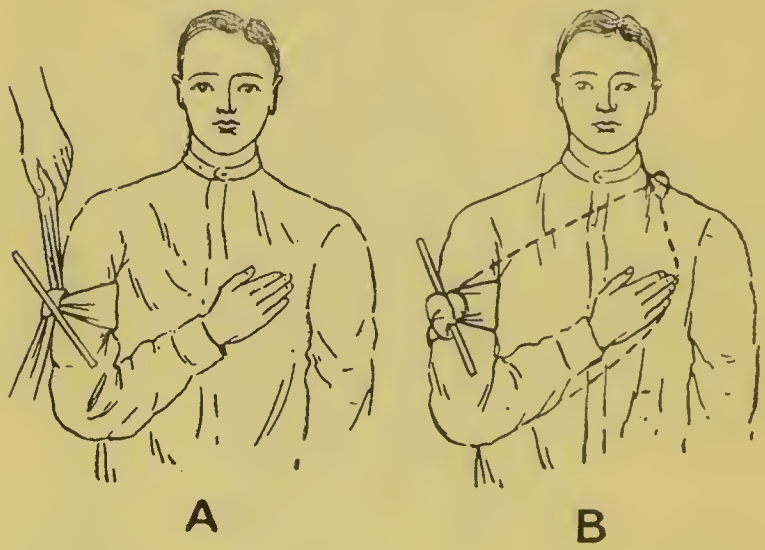


FIG. 18

firm, twist the stick round and round until you have exerted sufficient pressure on the pad to stop the hæmorrhage. Fix the stick by means of twisting the ends of the bandage into a secure position, or by tying a handkerchief above the stick and below it. Finally put the arm into a St. John arm-sling, the hand being raised against the chest. In all cases of hæmorrhage in the upper limb the hand should be raised as much as possible.

Dressing on the Elbow

This dressing is applied to the elbow in exactly the same way as to the knee, and if you look at the illustration of the knee (fig. 39) you will see just what is meant. Fold a hem in the Base of your bandage, and place it a little below the elbow, the point rising above the elbow. Carry the Ends round the fore-arm, cross them over the front of the elbow, carry them round the arm above the elbow, tie off at the *back* of the arm just below the Point, and finally turn the Point down over the knot and fix by a safety-pin.

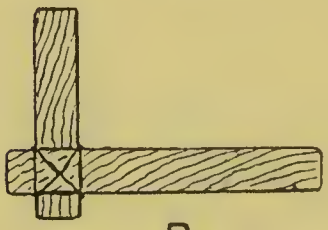
Angle Splint for Elbow

This splint may be used for any injury to the elbow or for a fracture near the elbow of any of the three bones which form the joint—the humerus, the ulna or the radius. We show by the diagram (fig. 19) exactly how the angle splint is made by taking two straight pieces of wood and binding them together at right angles with string or with a narrow bandage. Place the splint against the inner side of the limb, taking great care that it is not long enough to push up into the arm-pit. It is a good thing for the angles of the splint to protrude slightly, as they thus form an added protection to the injured part. If the splints are to be applied to a bare limb they must be suitably and softly padded, but need not be padded if the clothing is kept on. Apply a small arm-sling, as it is impossible to make a large arm-sling really comfortable over an angle splint, and you must also avoid putting pressure on the injured part.

Pad and Flexion Applied at the Elbow

Flex the elbow, place a pad in the bend of the elbow (fig. 20), and place the centre of a

A



B

FIG. 19

FIG. 20

narrow-fold bandage at back of the wrist, cross the Ends and carry them behind the arm, bring the Ends forward again, cross them, and tie off close to the wrist. Place arm in St. John sling with hand high against the breast.

Crushed Hand

Place the hand on a flat splint, putting a small pad in the palm of the hand and another between the tip of the elbow and the splint (fig. 21). Take a narrow-fold bandage and place the centre of it across the back of the

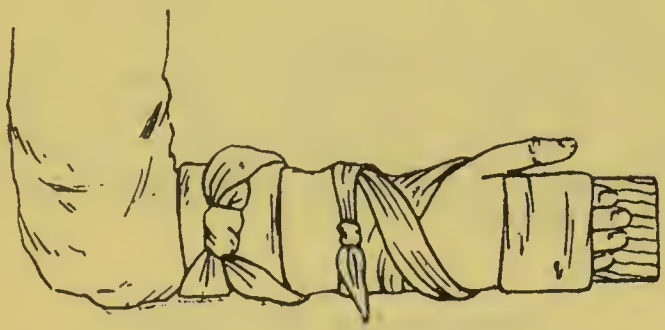


FIG. 21

hand so that the finger nails show. Cross it under the splint and carry the ends up and round the wrist again, and tie off on the top. Leave the thumb out. Another narrow-fold bandage is put at the elbow-end of the splint to keep it in position. If the wrist were injured you should put on the same kind of bandage, but apply it so that the twists and knots avoid the injured part. If the splint is small enough to allow of a St. John sling it would be most comfortable, but you may use either large or small as circumstances dictate.

If you are short of bandages you can make a good sling for the arm by using broad tape or strands of any material, making what is known as a

Clove-hitch.—Take a narrow-fold bandage lying across the palms of your hands with about 12 in. between your hands. With an inward twist of both your hands throw the Ends of the bandage towards you, so that they hang down between the loop of the bandage and your body. You now have your hands inside two circles, slip the right hand through both circles and put the patient's hand which you want to sling through both loops. Separate the loops so that one comes at the wrist and one higher up towards the elbow. The two Ends should now be pointing upwards, and you can carry them round the neck and tie into a knot. This makes an excellent impromptu sling, and can be made of broad tape or any strip of material.

Hæmorrhage of the Hand

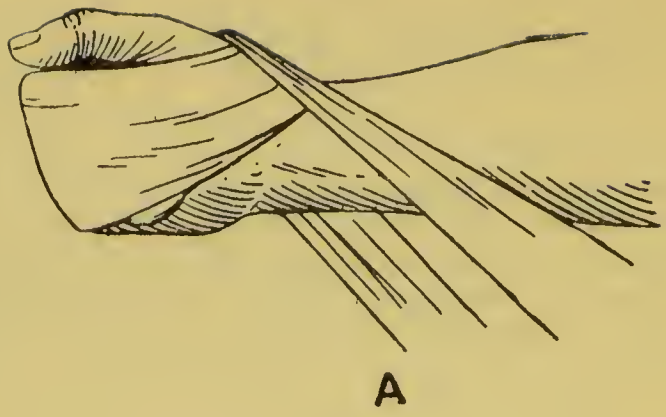
There are two methods of bandaging this injury when there is hæmorrhage from the hand without any sharp substance having been left in the wound (fig. 22). If you suspect the presence of glass or any other sharp material you must stop the bleeding by applying pressure on the wrist. In the event of the wound being free of foreign bodies you must place a pad in the hand of a sufficient size for the fingers to close down upon it firmly. The first method of securing the hand in this position is to make a fold in the base of the bandage, and when the hand is held upright the bandage is placed over it so that the point

comes to the front of the elbow. Bring the Ends sharply up across the clenched hand, backwards and forwards until you tie the knot over the pad in the palm. You will now have the Point of the bandage gathered up tightly under the encircling ends, as shown in our illustration. Pull the point taut and bring it forward over the knot, and pin into position.

Another Method.—Take a narrow-fold bandage and place the centre of it across the

FIG. 22

clenched knuckles (pad in palm) (fig. 23). Cross the bandage on the outer side of the wrist, taking care to keep it low enough to get it beneath the ridge which is formed by the root of the thumb (fig. 23A). Cross the bandage over the back of the hand and tie round and round tightly, the knot coming over the pad in the palm. The object of both these bandages is to keep the fingers clenched down tightly on the pad in the palm and the test to find out whether your bandage is effective is to ask your patient to try and move the fingers. Movement of the fingers should be impossible.



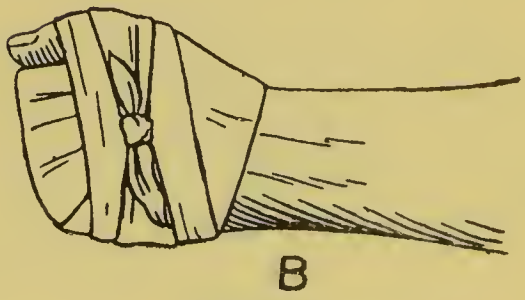


FIG. 23

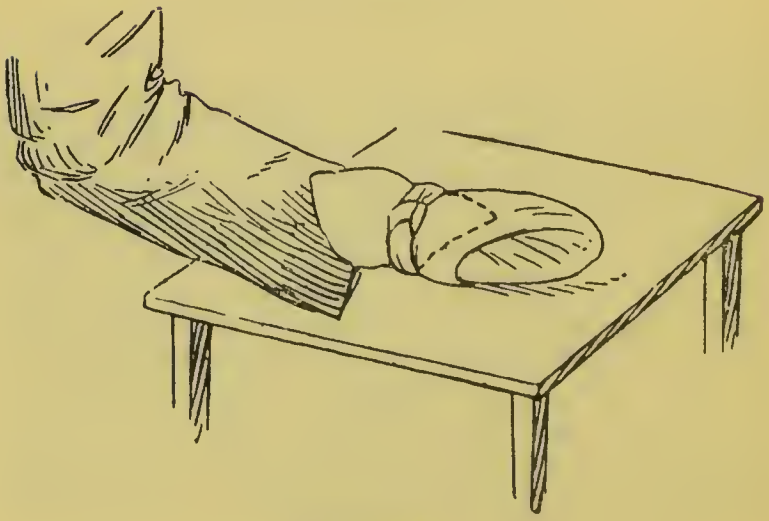


FIG. 24

Burn or Wound in Hand

Place the bandage flat upon the table, lay the injured hand upon it so that the wrist touches the Base, turn the Point of the bandage back over the fingers (fig. 24). Now take the Ends of the bandage across the Point and over the back of the hand, passing them round and round the wrist, and tie. The Point of the bandage can now be pulled taut, as is shown in our sketch; turn down over the knot and pin.

CHAPTER V

BANDAGES FOR THE TRUNK

Fractured Clavicle

THERE are several ways of putting up a fractured clavicle (collar-bone), and I am going to give you the three methods which are most

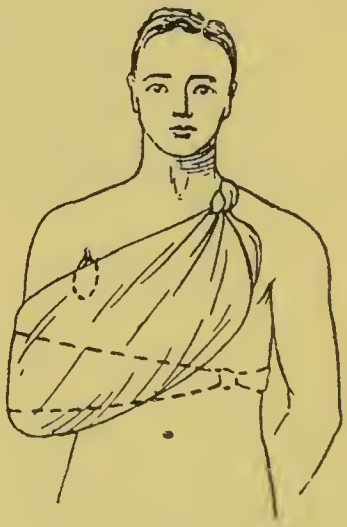


FIG. 25

usually followed. Place a pad in the arm-pit and put on a St. John arm-sling, drawing the hand high up on the chest (fig. 25). The knot of the St. John arm-sling, of course, always comes on the uninjured shoulder, which makes it particularly suitable for a fractured clavicle. Now take a broad-fold bandage and place the centre

of it over the elbow of the injured side, bring the ends round the body, and tie off as in diagram. Draw this bandage tight so that it forms a leverage on the elbow, the object being to keep the arm well back.

Method 2.—(Fig. 26.) Look at the illustration well before you begin to do this bandage, and I think you will understand the method. It is precisely like a large arm-sling, but instead of bringing the one end *over* the shoulder you pass it *under* the arm-pit and tie on the opposite shoulder, thus avoiding the injured clavicle. Place a broad-fold bandage round the elbow of the injured arm and tie on the opposite side of the body. Do not forget to place the pad in the arm-pit.

Method 3.—(Fig. 27.) It may happen that you have only one bandage or length of material at hand when you have to put up a fractured clavicle. In this case take a narrow-fold bandage, placing the centre against the (right) arm just above the elbow. Pass the left end round the arm, and as you hold the right end across the front of the body pass the left end over it and under, drawing it back sharply so that the arm is held backwards. Carry the left end round the back of the body and tie in front of left side, so that the hand is caught firmly and held upwards by the bandage as it passes under it.

Fracture of both Clavicles

This accident happily seldom happens, but if you have to deal with it you must put pads in both arm-pits, and then tie the one end of a narrow-fold bandage round the upper part of the arm close to the arm-pit, and the end of a second bandage round the other arm in exactly

FIG. 26

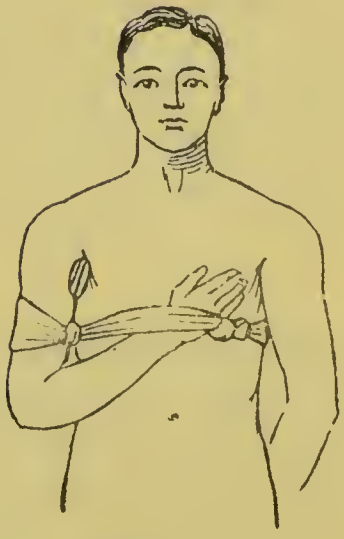


FIG. 27

the same position (fig. 28). You can always remember this bandage by thinking you are a child again and are going to play at "horses," the two bandages being the reins! Cross them sharply over the back and bring the ends forward round the flexed arms, tying the knot under the hands, which will be folded one over the other just above the waist line.

Method 2.—Tie two narrow-fold bandages separately round each arm at the arm-pits so

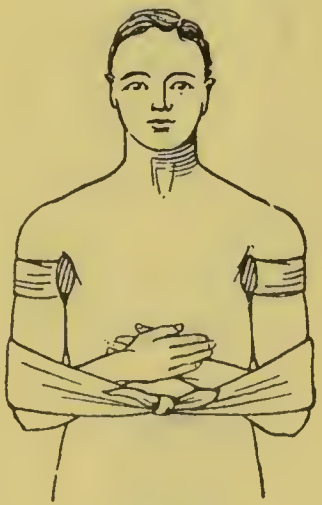


FIG. 28

that they form circles. Draw a narrow-fold bandage under both these circles at the back and tie tightly. This will have the effect of pulling the shoulders well back.

Fractured Scapula

Place the centre of a broad-fold bandage obliquely across the fractured scapula (shoulder-blade), bringing one end over the shoulder of

the uninjured side and the other end across the chest (fig. 29). Cross them on the uninjured shoulder and tie off under the arm.

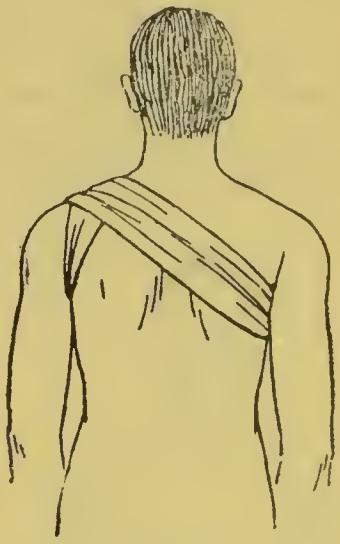


FIG. 29

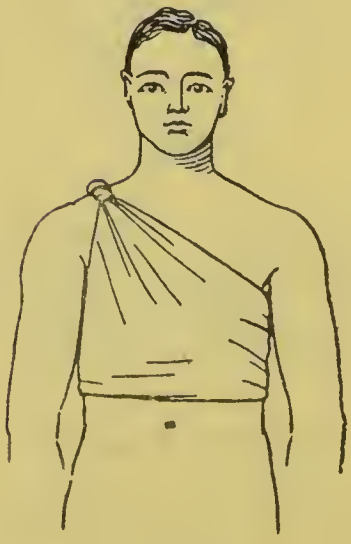


FIG. 30

Dressing on Chest

The sketch (fig. 30) shows you very clearly how to apply this bandage for keeping a poultice or dressing on the chest or back. Fold a hem at the base of the bandage and place it just above the waist-line of the patient, placing the Point on the shoulder. Tie the Ends behind immediately at one side in a vertical line

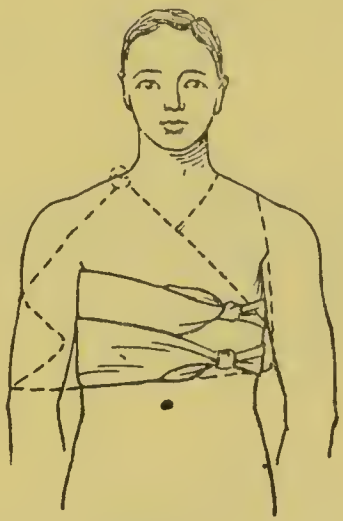


FIG. 31

with the Point, taking care to tie them so that you have one long end left, which you carry up and tie to the Point on the shoulder. This dressing can be applied at either side of the chest or back.

Fractured Ribs

Take a broad-fold bandage and place the centre of it immediately above the seat of injury, tie off on the opposite side of the chest (fig. 31). Take a second broad-fold bandage

and place it just below the seat of injury, so that half of its width overlaps the bandage already in position; tie off on the opposite side of the chest. Place the arm on the injured side in a large arm-sling.

If blood of a frothy nature is being coughed up you will know that the lung has been injured, and in this case you must not put on any bandage at all.

CHAPTER VI

LOWER EXTREMITIES

Fractured Femur

When called upon to treat a fractured thigh (femur), the first thing for you to do is to draw

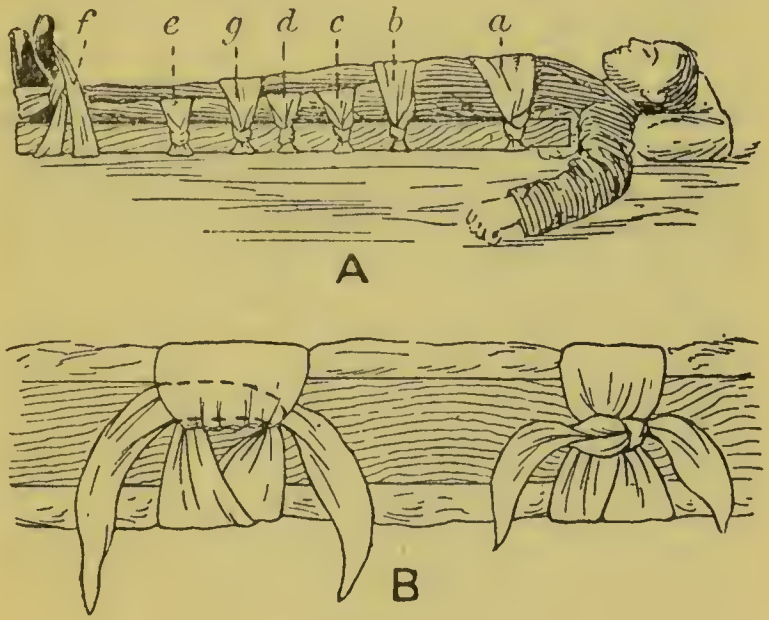


Fig. 32

the injured leg gently down until it lies in the same position as the uninjured leg (fig. 32). If you are alone you must secure the two feet together by passing a bandage behind the two ankles, crossing on the upper insteps and carry behind the ankles and back again.

If you can get a helper, instruct him to hold the foot *and not to let go* until you have finished the work of bandaging. This is exceedingly important, as you may easily make a simple fracture into a compound one by letting the foot go before the limb is firmly fixed in position. For a fractured femur you will require a splint which is long enough to reach from the arm-pit to below the boot, and very generally the only things which one can get are a broom-handle or, possibly, a pair of billiard cues. You will also require seven bandages. The less you move the injured leg the better, so that in putting on the bandages you must be very careful to push them under the limb gently and slowly. An excellent means of doing this is to put the centre of your folded bandage over any piece of flat stick that is at hand, and push this gently under the limb. The bandage will appear at the other side of the leg in a loop. For the body bandages you will require the full length of the bandage, but for the lower ones you can leave the bandage double placing the left end of the bandage through the loop from the left side, and the right end of the bandage through the loop from the right side and tie off on the splint. This process is clearly shown in the sketch (B).

The position of the bandages is clearly shown in fig. 32. The top one holds the splint in position, and should be made rather wide as it passes round the chest; the second one goes round the hip-joint, and should also be fairly wide. Then the next two come above and below the fracture on the thigh itself, the next is on the leg, the sixth ties the feet together, and as you bring it up on the side of the outer splint, take a loop round the splint with the bandage so that it catches it firmly into

position. Finally, place a broad-fold bandage around both knees. When you have a helper you should, if possible, put a short splint on the inner side of the injured limb.

Fractured Femur (Female)

In the case of the fractured femur occurring in a woman, you should make her sound leg act as the second splint, and place all the bandages round her skirt and body (fig. 33). This is precisely what you must do if you have to treat a fractured femur in a man *when you*

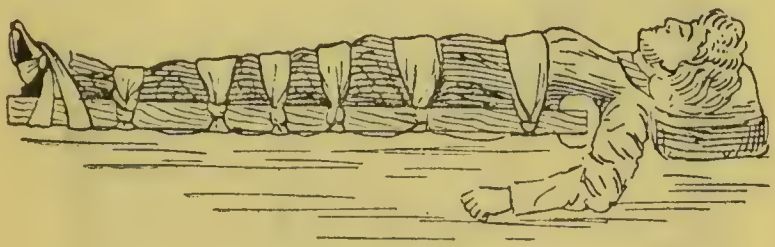


FIG. 33

are alone, for then it is useless for you to try and hold two splints in position. Use the one long outer splint, and remember to tie the feet very firmly together *first of all*.

Fractured Patella (Knee)

The fracture of the patella (knee-cap) is so frequent an accident that First-aiders are very likely to have to attend to it. Place a splint at the back of the leg, which you must raise (fig. 34). Let your patient sit up, as that position relaxes the strain on the muscles of the thigh. Take a narrow-fold bandage and place it above

the knee-cap, cross the two ends under the knee, and bring them up and tie off in front below the knee-cap. Secure the splint at top and bottom with narrow-fold bandages.

Tourniquet on thigh exactly like tourniquet on arm (see page 32).

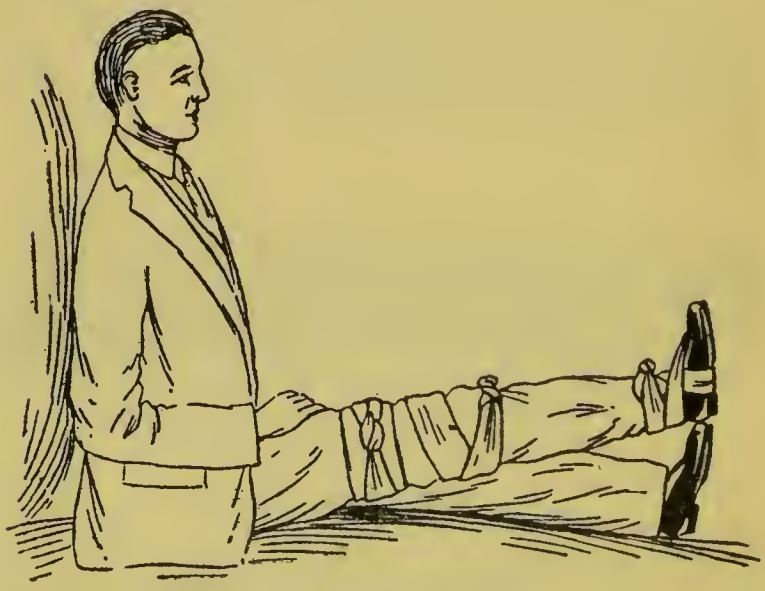


FIG. 34

Fractured Leg

You will require two splints, one long enough to reach from above the knee to below the boot, and the other to go all the length of the inner side of the leg; also five bandages (fig. 35). Draw the leg down gently into the correct position, and make a helper hold it in that position whilst you apply splints. The first and second bandages are placed above and below the seat of fracture, the third above the knee,

the fourth secures the feet together, and the fifth is placed across both knees. In the case of having no helper or the patient being a woman, use only one splint, and bind across both legs, being careful to *tie the feet together first.*

Crushed Foot

This bandage is precisely like that used for crushed hand, though at first sight it looks

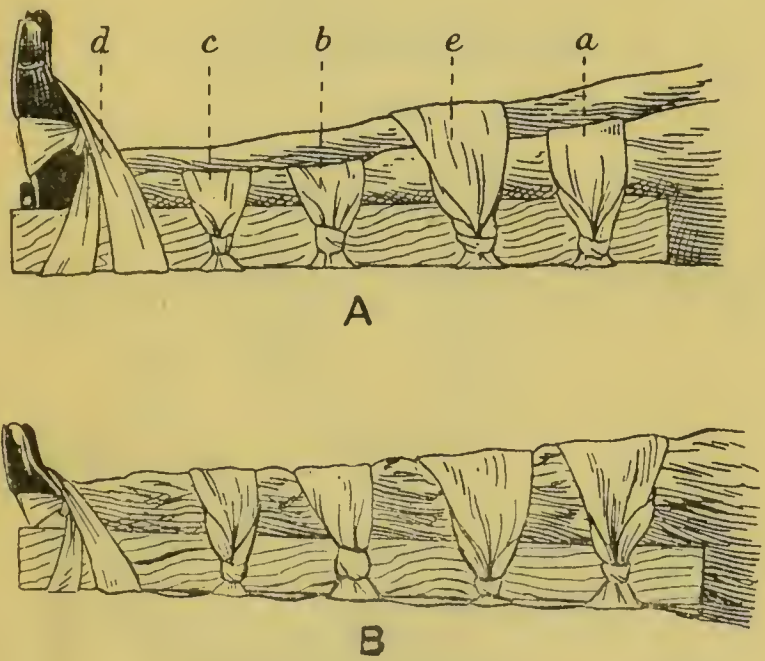


FIG. 35

somewhat different (fig. 36). Place the narrow-fold bandage across the toes, just leaving the nails to show, cross the bandage beneath the splint, which you have already placed under the foot, and carry the Ends backwards and upwards *behind* the ankle; then bring them

forward, cross over instep, and tie off on splint. You must always avoid putting any knots or pressure on the injured parts.

FIG. 36

Varicose Veins

The first and most essential thing to do is to raise the leg, and if there is nothing upon which

FIG. 37

you can put the injured leg, make the patient lie on the floor, and prop the leg against the wall or anything that is handy (fig. 37). You

must be prompt in dealing with a varicose vein which has burst, as it is quite possible for a patient to die or to lose so much blood as to become dangerously exhausted. Place a pad and narrow-fold bandage over the bleeding spot, tying the knot over the pad. Place a broad-fold bandage above and another one below the injury, as in the case of a varicose vein you get bleeding from both ends of the wound, and must stop it from above as well as below.

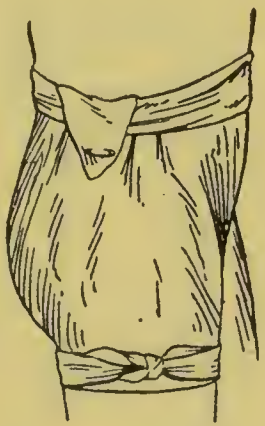


FIG. 38

Dressing on Thigh

This bandage is put on in precisely the same manner as that for a dressing on the shoulder. Make a folded hem in the Base of the bandage and place it round the thigh, tying off on outer side (fig. 38). Put a narrow-fold bandage round the waist, and then bring the Point of the thigh bandage up and through the waist-band and pin down, as shown in the sketch.

To Stop the Popliteal Artery

Pad and Flexion of Knee—like elbow.

Dressing on Knee

No sketch was given for the elbow bandage as it is exactly the same as that for the knee (fig. 39). Make a folded hem at the Base of your bandage, and lay the centre of the bandage across the knee with Point upwards.

FIG. 39

Carry the Ends of your bandage behind the knee, cross them, and tie off in front above the knee-cap. Pull the Point taut and pin it down over the knot.

Dressing on Foot

Spread your bandage out flat, being careful to keep it clean by putting something beneath it, and place the injured foot on it so that the heel is a few inches from the Base and the

Point lies beyond the toes (fig. 40). Bring the Point of the bandage back over the toes, and then draw the Ends of the bandage upwards and round and round the ankle, enclosing the

FIG. 40

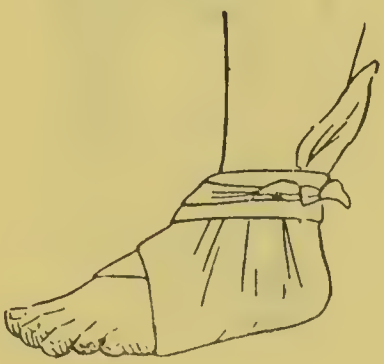


FIG. 41

Point. Pull the Point taut and draw it down into position and pin.

Dressing on Heel

Spread your bandage flat on the floor (taking care to keep it clean by spreading paper beneath it), but this time the Point lies well behind the heel and the Base is at the toes (fig. 41). Draw

the Ends upwards, and cross them over the front of the ankle and behind it, catching in the Point. Tie off at the back of ankle, and after pulling the Point taut, pin it down over the knot.

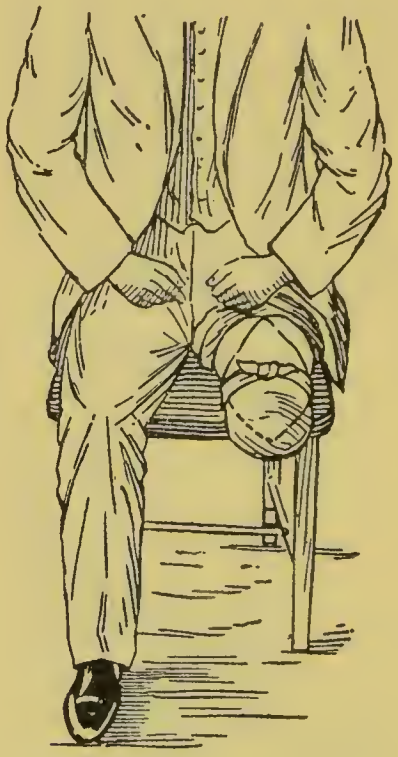


FIG. 42

Sprained Ankle

We give no sketch of this as it is very easily understood. Place the centre of a narrow-fold bandage under the sole of the foot, draw the Ends up, and cross them on the instep and carry them behind the ankle, bring them forward again, and tie off on the sole. This is an

excellent method if you want to prevent the patient from walking, as he will then have a knot beneath the boot, but in other cases you can tie off above the foot.

Stump (fig. 42).—For a bandage for the stump of a leg (or arm) you would fold a hem in the base of your bandage and place this under the stump, the Point pointing away from the limb. Take the Point and carry it over the dressing, which will be on the stump-end, and bring the Point up; tie the two ends above the Point, as shown in our illustration, and finally draw the latter down over the knot, as indicated by dotted line, and secure with a safety-pin.

CHAPTER VII

HAND-SEATS AND HAND-GRIPS

It is very important that the First-aider should know how to make hand-seats so that a patient may be carried comfortably. Even if you are not strong enough to be able to do this yourself, you can very often get some kindly helpers who will take their instructions from you. The sad thing that only too often happens is that people are willing and anxious to help, but *do not know what to do*. Learn your hand-grips and hand-seats, and you will be able to tell others exactly what to do when you want your patient moved. But against this you must remember that the accident must be TREATED ON THE SPOT, wherever that spot may be. Mr. Cantlie constantly insists upon this point, saying that if an accident happens in the middle of Piccadilly the traffic must be diverted whilst the injury is attended to on the spot. The patient must not be moved one inch—no, not even on to the curb—before it is quite certain that no bones have been broken. If any kind of fracture has occurred to the lower limbs splints must be applied there and then, before any attempt is made to get the patient out of the roadway or even lifted on to a litter or stretcher.

Four-handed Seat

A very comfortable seat can be made for the patient who is able to put his arms round the necks of two helpers. Each helper grasps his left wrist with his right hand, and then both

the free left hands grasp the right wrists of the other person. This is clearly shown in fig. 43A.

Three-handed Seat

This is made in the same way, but one helper keeps one hand free, which he places on the other's shoulder, thus making a back against which the patient can lean (fig. B).

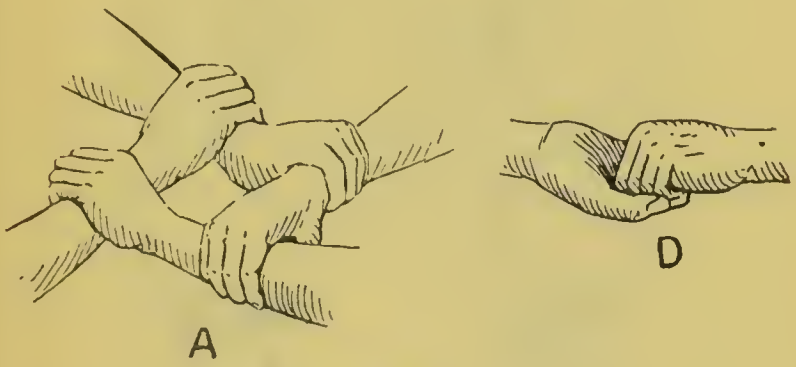


FIG. 43

Hand-grips

There are two kinds of hand-grips used for carrying patients. In the one shown in our figure (C) you will see that the fingers are interlaced upwards. The other (fig. D) you simply half-close your hand, and hook it into the half-closed hand of the other helper.

Another way of carrying a patient is for the two helpers to stand opposite one another, gripping hands, keeping the two hands that come in front low down, so that they form a kind of seat for the patient, the other two hands higher up to catch his shoulders.

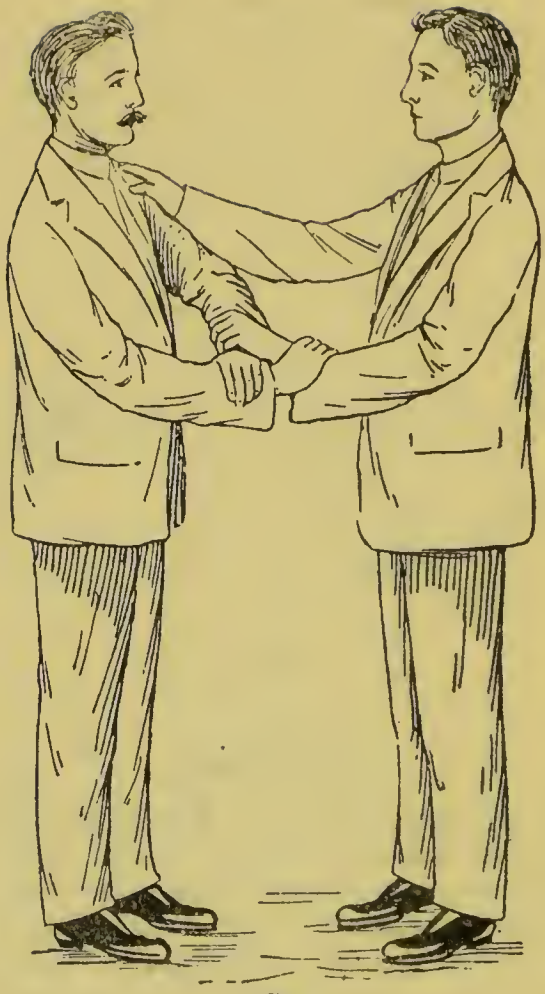


FIG. 43

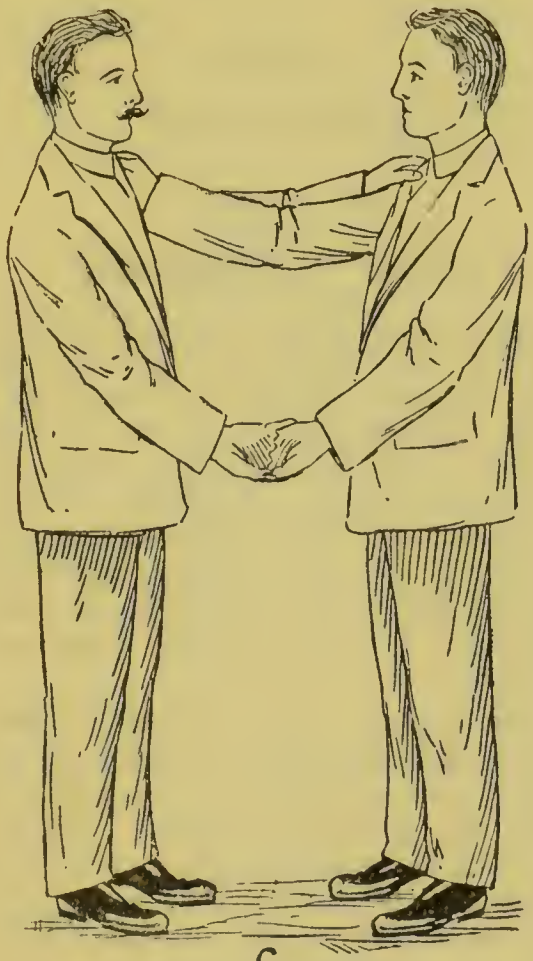


FIG. 43

Part II

Roller Bandaging

CHAPTER I

POINTS TO REMEMBER

ROLLER bandaging, the second branch in the art which the student of nursing must learn, is generally thought to be more attractive than triangular bandaging. It is, of course, used after an injury has been attended to by a doctor, or in the minor injuries which may occur to any of us. When well done, roller bandaging looks exceedingly pretty, and is very comfortable for the patient, but, on the other hand, when it is not well done it can do great harm and look most untidy.

I would impress upon all students that they must learn the *principles* of bandaging before attempting to carry out the special bandages arranged for special injuries. Many times when I have been helping to teach bandaging at classes I have noticed that the students do not think it seems to matter how the bandage is put on, or taken off, so long as it looks all right when it is finished. This is absolutely the wrong point of view to take, and I venture to hope that readers of this little manual will take, not my advice, but Mr. Cantlie's, which is that they should master the principle before attempting to carry out the detail.

Fourteen Rules to Remember

(1) Always bandage the limbs upwards towards the heart: that is, from finger-tips to shoulder, and from toes to thigh.

(2) Always bandage the limbs from within outwards across the back of the limb. An easy way to apply this rule is always to hold the bandage in your right hand when you are bandaging the patient's left side, and in the

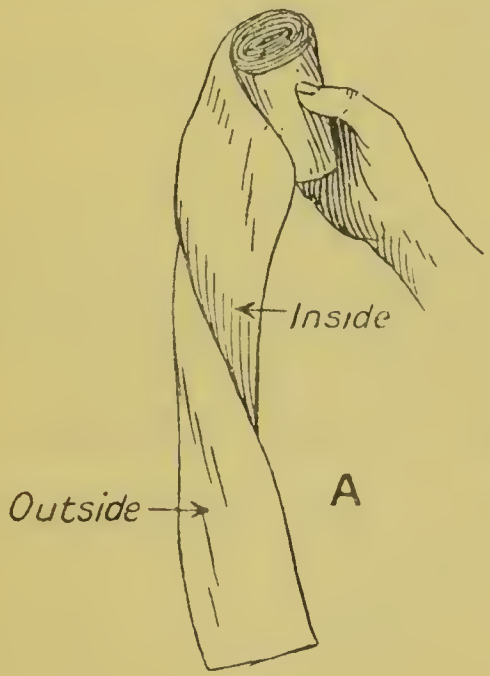


FIG. 1

left hand when you are bandaging the patient's right side. The "free" end of the bandage will naturally then fall across the limb from within outwards.

The inside of the arm is the little-finger side, and the inside of the leg is the big-toe side.

(3) Always hold the bandage so that the bulk of it is upwards whilst the outside of the bandage lies against your palm, which means that the *outside* (fig. 1A) of your bandage must be placed against the patient's limb.

(4) Never attempt to put on a bandage until it is fully and very tightly rolled.

(5) Be careful to bandage evenly, so that you get an even pressure.

(6) Always expose one-third of your bandage when bandaging a limb.

(7) Always leave the finger-nails exposed (unless they have been injured) so that you can see if circulation is being impeded.

(8) There are two methods of finishing off the bandage. One is to turn the end in and secure with a safety-pin; the other is to tear the bandage down the middle for a sufficient length and knot once, then carry the two ends thus made round the limb and tie off in a knot.

(9) Never cover the tip of the elbow or the heel, unless the injury necessitates your doing so.

(10) Always stand immediately opposite the front of the limb which is to be bandaged, and not on one side of it.

(11) When bandaging an upper limb always flex (bend) the elbow (unless injuries prevent your doing so), as you should bandage the limb in the position in which you wish it to remain.

(12) Do not take a turn round the wrist or round the ankle in order to fix a bandage, as this is very likely to impede circulation.

(13) According to some authorities, you should never bandage the fore-arm simply from the wrist upwards, but always include the hand,

and in the same way bandage the foot before you commence to bandage the leg. With a little practice you will soon learn how to commence all bandages by laying the free end across the limb without fixing it round the wrist or ankle.

(14) Always gather your bandage up in a bunch as you go, when removing a bandage. To unwind it from a limb as you would unwind a coil of rope is a heinous crime in the eyes of a medical man. There is a good reason for this rule. In carelessly unwinding a bandage you would be very likely to jar the limb and do damage.

General Principles

The object of roller bandaging is to keep dressings in position and also to give support to the injured part. Limbs are sometimes bandaged in the case of extreme collapse from internal hæmorrhage, so that all the available blood should be driven into the body. Bandaging is sometimes used to exert pressure on some particular part, and it is also used to prevent hæmorrhage from small blood-vessels which have been cut through during an operation or injured by accident.

The rule which tells you not to cover the finger-nails or the toe-nails, unless you are obliged, so that you may see the state of circulation, is a very important one. If you have put on your bandages too tightly or unevenly you will find that the nails will turn a dark blue. This means that you have compressed the veins and you will get numbness and swelling in the fingers or the toes. This is also one of the reasons why you should never cover the elbow or the heel unless you are obliged;

another reason being that the bandages are a great deal more comfortable when they do not cover these parts.

It is well for you to remember the usual length and width of roller bandages, which are as follows:

Finger bandage,	1½	yd.	in length,	1	in.	in width.
Upper limbs	4	„	„	2-2½	„	„
Lower limbs	6	„	„	3-3½	„	„
Trunk	8	„	„	5-6	„	„

In rolling bandages, be careful to keep them very tight. If you have not got a roller machine you may pass one end over the top bar of a chair, through the space, and under the lower bar, getting a friend to hold it whilst you roll the bandage from the top of the chair (fig. 1C). Remember that a bandage when it is fully rolled is called the "head" of the bandage. When you undo the end, that is called the "free" end. For some injuries you need to roll a long bandage from both ends, so that the two rolls meet in the middle. That is what is called a double-headed bandage (fig. 1B).

The single-headed bandage is the ordinary bandage that is rolled entirely from one end and secured with a pin. It is exceedingly difficult to roll a bandage sufficiently tightly by oneself. Any helper can hold the free end, and you will find that you roll more quickly, more evenly, and more tightly if you hold the bandage with your fingers underneath the bulk, your thumbs smoothing the upper surface as the roll is turned round and round. You will see from the diagram which is the *inside* and which the *outside* of the bandage.

Three Methods of Bandaging

(1) *Spiral.*—This is simply taking the bandage round and round a limb, exposing one-

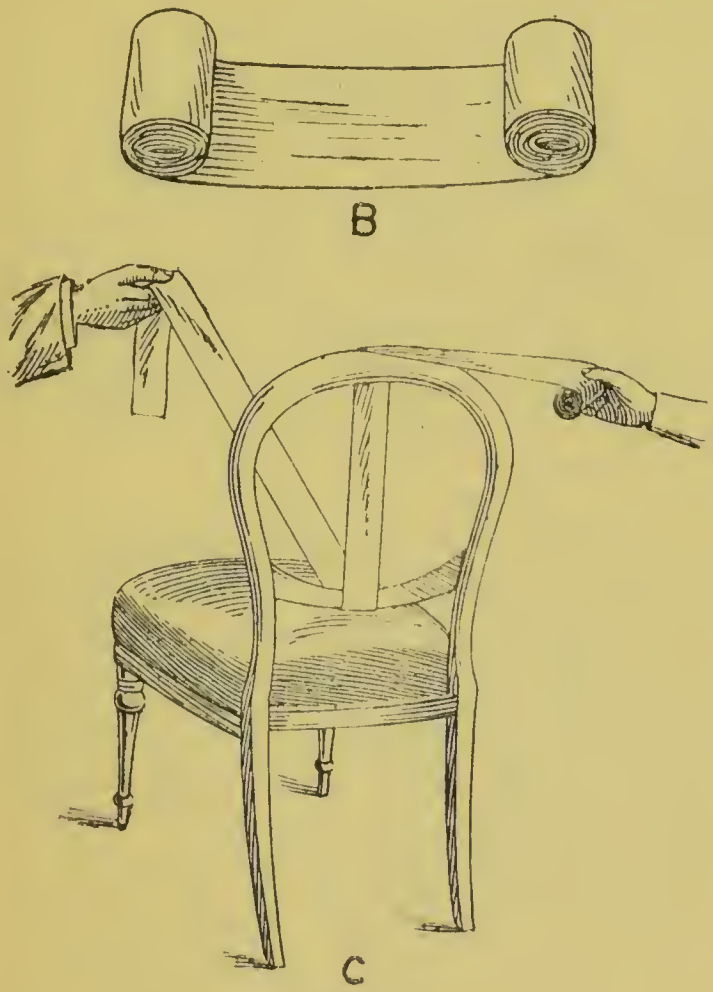


FIG. 1

third of the lower edge of the bandage as you go.

(2) *Reverse Spiral.*—As the limbs increase in size you will find that if you continued to do

the spiral the bandage would not lie close to the limb. In order to obviate this difficulty you must take what is known as a "reverse" spiral. To make a reverse place the thumb of your free hand on the centre of the bandage, turn the hand which holds the bandage towards you, so that it partially covers the other thumb and lies in a slanting position round the limb. Repeat this process in exactly the same position each time you encircle the limb, so that you get a pattern as shown in figs. 6 and 20. To make this more clear, let us suppose you are going to make a reverse on the right arm. Reverses should always be made on the thick, muscular or "fleshy" side, that is, a little to the outer aspect of the limb; thus, on either arm your reverses will come slightly on the little finger side of the centre line. Directly you find the arm is increasing in size, so that the spirals will not lie satisfactorily upon it, you must take a reverse. The bandage will be in your left hand. Lay your right thumb on the lower half of the bandage as shown in fig. 6. With your left hand turn the bandage over towards you (partially covering your right thumb-nail) and making it take a slantwise fold. Carry the bandage round the arm, and repeat the process every time, never taking a spiral turn between the reverses.

The third kind of bandage used with the roller is known as the *spica* or *figure-of-eight*.

If you have once grasped these three kinds of roller bandaging you have only to apply them to different parts of the body, and can, with patience and perseverance, become an adept in the art of bandaging.

CHAPTER II

THE HEAD

STUDENTS who have read my chapter on bandaging the head with the triangular bandage will remember what I said about being careful to get the bandage well down almost on to the eyebrows, and also down at the back beneath the occipital bone. In all cases of bandaging the head, the ears are left free, unless they are injured.

The Capelline (Fig. 2)

This bandage entirely covers the crown of the head, and should be able to be taken off as a complete cap when it is finished. This is the test that may be applied to your capelline to find out whether you have put it on well. Let your patient sit down, and you must then stand behind him. You will require a double-headed bandage, and if you have not one of sufficient length (8 yd. long) you may pin or sew two roller bandages together, joining them so that the two ends would roll inwards to meet each other. You should then make one "head" of the bandage about one-third larger than the other by rolling some of the bandage off from the one to the other. Hold the larger portion in your left hand, and remember that this is the bandage which is to continually encircle the head, whilst the other bandage will go backwards and forwards

from nape to forehead. Place the *outside* of your bandage against the forehead of the patient, bring both ends behind the ears, cross them sharply, changing hands, at the nape

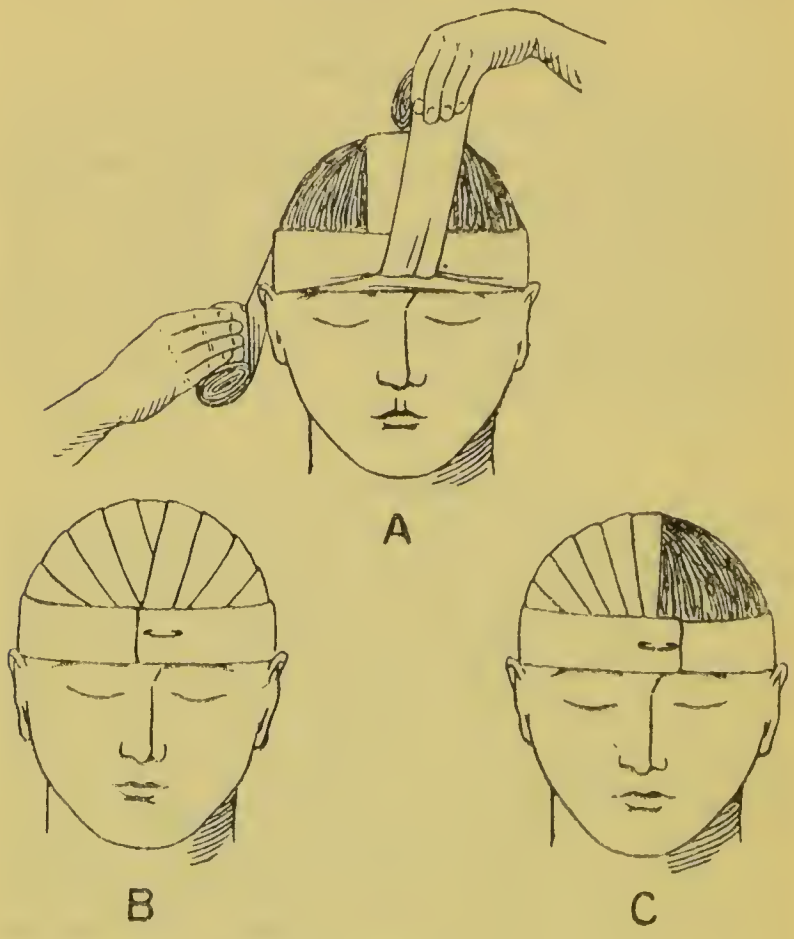


FIG. 2

of the neck; carry the bandage which is now in your right hand round the head, and the bandage which is in your left hand across the centre line of the crown to the forehead,

holding it downwards, on a line with the patient's nose. Pass the encircling bandage over the central one, which you then turn upwards and carry across the head on one side of the previous bandage, covering about one-third of it on the right side. When the bandages meet at the neck you pass the encircling bandage over the crown bandage, which you then carry forward to the forehead, but this time covering one-third of the central bandage on the right side. This process is repeated, taking your horizontal bandage always backwards on the right-hand side of the centre line, and forwards on the left-hand side of the centre line each time. It is held in position at the forehead and at the nape of the neck by the encircling bandage. Fig. 2 (A) shows exactly how this bandage is started, and fig. 2 (B) shows it when it is complete.

Half Capelline (Fig. 2)

For this bandage you proceed in exactly the same way as for the capelline, but instead of taking the scalp bandage on alternate sides of the head you always keep on the same side until you have covered the injured half in entirely. In both these bandages you should take one final encircling bandage round the forehead, and pin off where the pin can neither hurt the injury nor be in the way of the patient when he lies down.

Dressings on the Scalp

A roller bandage can be applied to any part of the scalp, but it would be useless to give directions for this as a certain amount of

deftness and ingenuity must be used for each individual case. One of the best bandages for keeping any kind of dressing on the top of the head or the forehead is that which is shown in fig. 13 (p. 24) in Part I.

The Twisted Capelline (Fig. 3)

This style of capelline is excellent for keeping a dressing on the fore part of the head, or to exert pressure on any particular spot. Stand at the left side of the patient who is sitting down. Take a 2½ in. bandage (8 yd. long) and, taking a single turn round the forehead, bring the single-headed roller back to the left ear, where you catch it under the "free" end, the latter being held in the right hand above the patient's left shoulder. Carry your roller well over the crown of the head, under the chin, and up behind the left ear, where you again catch it behind the free end, but this time take the roller round the forehead, being careful to keep it low down at the back, behind the occipital bone. Bring it forward, and carry over the head in a centre line between the two previous turns; take this under the chin and up behind the left ear, also behind the free end. Now carry the roller across the forehead, round at the back, up again by the left ear, always using the free end as a catch to keep it in position; take the roller across the head and under the chin. Continue these alternate turns until you have completely covered the front portion of the head in a symmetrical way, and tie off by means of the free end. The ends must always be tucked in, though for the sake of clearness they have sometimes been left free in the pictures.

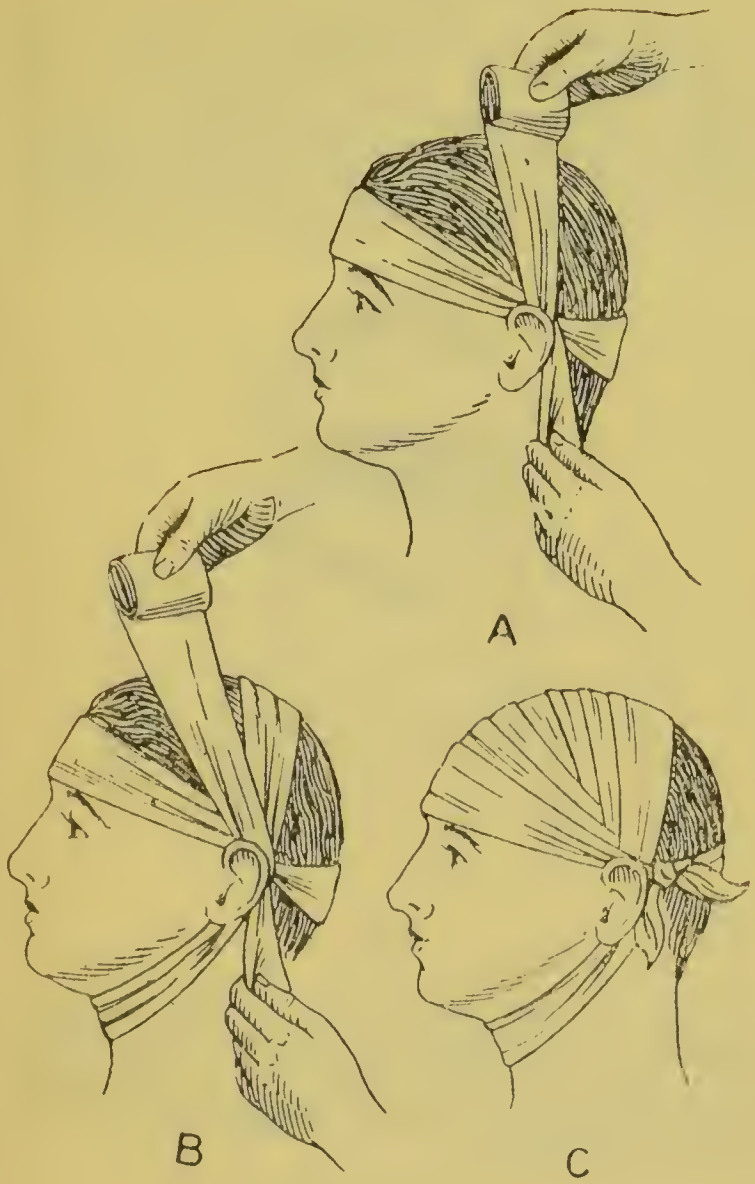


FIG. 3

Cut Throat (Fig. 4)

Should you have to bandage a case of cut throat or anything which necessitates the chin being kept close down to the chest, one of the simplest methods is to put a roller bandage firmly round the forehead and then a separate one well back across the crown of the head,

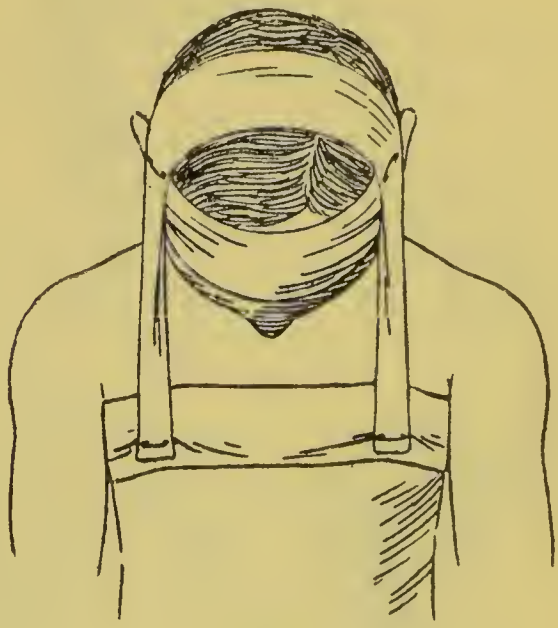


FIG. 4

and pin it on either side to the forehead bandage, leaving two long ends which can be tied down at any angle to a broad-fold bandage, which you have already placed round the patient's chest.

Eye Bandage

The manner of applying this must depend largely on the position and nature of the injury.

In some cases you require pressure over the eye, and in others it must be avoided. The usual method of applying the bandage is to carry it round the forehead, then obliquely across the eye and again round the head, taking the turns alternately until you have covered in the dressing.

CHAPTER III

THE UPPER EXTREMITIES

The Hand, Wrist and Forearm (Fig. 5)

One of the first bandages which the beginner should do again and again until it is really perfect is that of the hand and forearm, as it

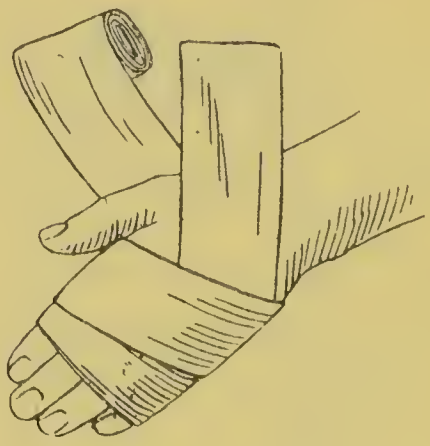


Fig. 5

teaches all the three kinds of bandaging. To bandage a hand properly you must apply what is known as a Figure-of-eight, and if you will work the name out in your mind, as you put on the bandage, you will see the reason for it, and, consequently, you will never forget how it goes. To bandage the right hand take the roller bandage in your left hand, and stand immediately opposite the patient with the hand and arm outstretched before you, palm downwards. Place the " free " end of the bandage

so that it dangles over the root of the thumb; bring the bandage across the back of the hand in a slanting direction to the root of the little finger-nail, where you pass it under the hand, and bring it up between thumb and forefinger, taking one straight turn across the hand so that you just show the little finger-nail. Pass it under the hand again and up between fingers and thumb, over the back in an oblique direction to the inner side of the wrist. Pass it under the wrist and upwards again across the hand to the root of the little finger. Continue this process, always exposing one-third of the

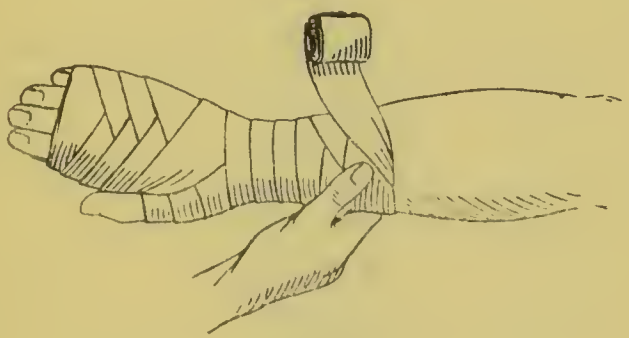


FIG. 6

underlying bandage until you have entirely covered in the hand. You will find that as you cover the hand you will partially cover the lower portion of the thumb, as shown in fig. 6. Take a few spiral turns round the wrist and then, as the arm increases in size, make reverses, as already explained on p. 68. You will see by the picture that these reverses continue up to the elbow, the elbow is then flexed, so that the forearm is at a right angle to the arm, the bandage is carried in a figure-

of-eight manner (see fig. 10) over the elbow and finally up the arm, either as a simple spiral or reverse spiral, according to the muscular development of the arm.

Wool or some sort of dressing must always be placed between the fingers when the hand is being bandaged.

Spica on Thumb (Fig. 7)

Spicas seem very often to be a source of despair to the beginner, but they are really

FIG. 7

quite easy if you will carefully think out the principle. The comfort is that once you have grasped the principle you can apply it anywhere. I am going to try and explain very clearly how to put on the thumb spica, and then when we come to the other spicas I shall expect you to know the system, so that with few directions you will quickly master all the

spicas that are used. I would like to emphasize again what a mistake it is for students to try and learn bandaging in a desultory way. They should take the various bandages in their proper order and learn each one thoroughly.

Stand immediately opposite the (right) thumb to be bandaged with knuckle upwards and the nail pointing towards you. Take a ¾ in. or 1 in. bandage 2½ yd. long, and place the outside of the bandage across the root of the thumb, so that the free end dangles down on the palm side (thumb side) of the wrist. Carry the bandage upwards over the root of the thumb, pass it between the thumb and hand, and bring it round so that one spiral turn lies horizontally below the nail. According to the length of the thumb take two or three spiral turns, but as you approach the thickness of the thumb you must pass the bandage obliquely across the thumb downwards, across the back of the hand, then under the wrist to the thumb. This time you pass over and round the thumb (taking care to leave one-third of the previous bandage exposed), and again you carry the bandage downwards over the back of the hand, under the wrist, and up to the thumb, which you again encircle. Once you have grasped the way in which this spica goes on you will find that it comes quite naturally and easily. Repeat the movements until you have covered in the thumb. All the time you have left the commencing end dangling, and when you have covered in the thumb you tie off at the wrist. You will see for yourself that a spica is nothing more or less than a figure-of-eight bandage, as there are two loops to it—one round the thumb and one round the wrist.

Covering in the Tips of Fingers or Thumb

(Fig. 8)

It is comparatively seldom that you will have to cover in the tips of fingers or thumb, but there is a proper method for doing it, and you will find that unless you employ this method your bandage will promptly fall off.

As you will see in the sketch, you must lay the free end of the bandage lengthwise against

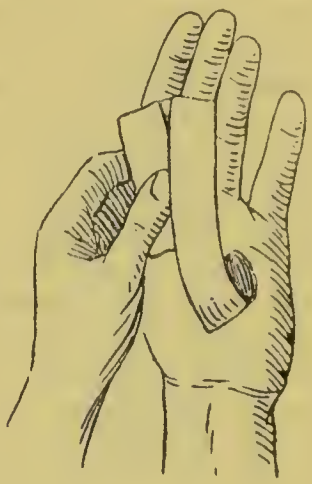


FIG. 8

the back of the thumb or finger. Pass it over the tip and down well past the first joint, where you double it upwards again over the tip, this time making a loop on the inner side of the thumb or finger. Each time you go backwards and forwards you hold the looped bandage in place with your left hand. The second and third turns over the tip should be arranged a little

on either side of the first one, so that the tip and its sides are well protected. Now take a spiral turn close up to the tip, remembering to start from the thumb side. Cover the finger in with spiral turns, and when you reach the base, knot your end with the "free" end (which has been dangling down the back of the hand all the time); then carry the two ends over the back of the hand to the wrist, where you tie off. It is wise to make this first knot at the back of the base of the finger as it gives additional support, and when the ends are finally tied at the wrist the injured finger is held a little more erect than his fellows and so out of harm's way. In some cases, notably for the thumb, it is wise to knot both ends together before carrying them round the wrist. This prevents the bandage from slipping.

Covering all the Fingers Separately (Fig. 9)

This bandage is required in the case of burns or scalds, and there is considerable art in making it neat and tidy when you have somewhat bulky dressings to cover. It is a "continuous" bandage—that is, only one long bandage (4 yd.) is used, and not separate ones for each finger. Stand opposite to the injured hand, which should have its palm downwards. Allow the "free" end of the bandage to dangle on the thumb side of the wrist, and bring the head of the bandage across the back of the hand to the inner side of the little finger, under which you pass it and over with a spiral turn, leaving just the nail exposed to view. Continue to take spiral turns (always exposing one-third of the bandage) down the little finger until you reach its root, when you

pass the bandage across the *back* of the hand to the wrist. Pass under the wrist and upwards on the thumb side across the back of the hand to the ring finger, up which you take one long spiral, and so reach the tip. Make a spiral turn, exposing the nail, and proceed as before. Each finger in its turn is thus covered, and if the thumb has been injured you can completely cover the hand by putting a

FIG. 9

spica on the thumb. If the thumb is uninjured you should leave it uncovered, simply taking a turn round the wrist and tying off with the free end, which you have been careful not to include in any of your previous turns. Take care to always bring the bandage over the *back* of the hand as you leave each finger, and not across the palm.

Elbow (Fig. 10)

There are two kinds of bandages applied to the elbow and the knee, and as different doctors have different ideas on the subject of bandaging it is as well for you to know them both.

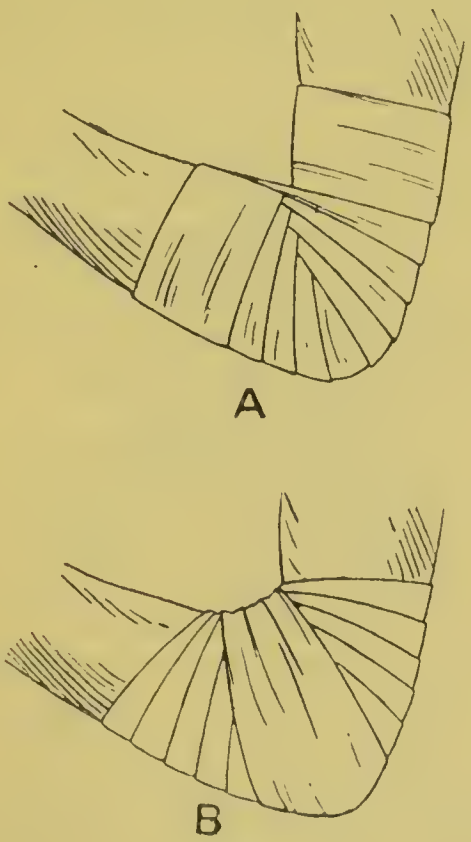


FIG. 10

You can inquire which one is preferred either at examination or at actual work, though when it comes to the latter a doctor, when he sees that a nurse is efficient and knows her work, is generally content to leave the style of

bandaging to her judgment. For examination purposes you should ask whether it is a "Converging" or "Diverging" bandage that you are to apply.

In fig. 10 (A) we show very clearly the Diverging bandage on the elbow. Flex the elbow and carry the bandage from in outwards, so that the centre of the bandage exactly covers the tip of the elbow. Carry the bandage round the bent elbow, but this time take it slightly *below* the tip; pass it underneath again and bring it slightly *above* the tip, always leaving one-third of the first round of bandage exposed. Continue to take these "figure-of-eight" turns alternately on the arm and on the fore-arm, always diverging from the centre or tip of the elbow. This bandage can be applied as part of the fore-arm and arm bandage when the elbow is involved in the injury.

Fig. 10 (B).—The Converging elbow bandage is put on in precisely the opposite manner to the Diverging one—that is, you take a spiral turn a couple of inches below the elbow (which is flexed); carry the bandage under the elbow, and bring it out about 2 in. above the tip of the elbow. Pass it round the arm and under the elbow downwards, and over the fore-arm so that it exposes one-third of the previous circle. Continue to take these figure-of-eight turns below and above the elbow until you have covered it in. Your last turn should be a couple of flat turns over the tip of the elbow. This is not as neat a bandage as the Diverging one, but it has its uses.

Fore-arm in Splints (Fig. 11)

The splints, of course, must be padded, and if you have no helper and the patient is help-

less, you may have to secure the splints in position with two strips of bandage at the top and bottom of the splint. Usually simple spirals make a perfectly neat bandage over splints. In fig. 11 the dressing is shown at either end of the bandage for the sake of clearness, but this would all be carefully covered.

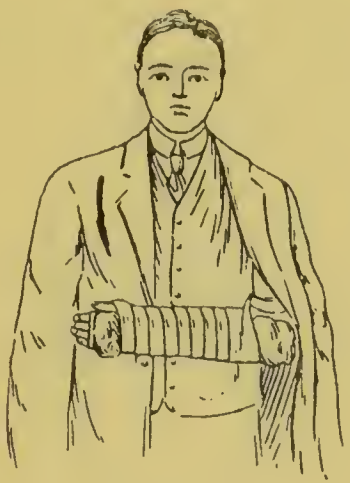


FIG. 11

Spica on Shoulder (Fig. 12).

You should find this spica very easy to apply, since you have already mastered the spica for the thumb. You have here the upper part of the arm and shoulder for the one loop, and the body for the other loop. Your bandage should be 3 in. wide and 8 yd. long. For the left shoulder you must stand immediately opposite it, and with the head of your bandage in your right hand pass round the arm from within outwards. Make a few reverses on the

arm until you are near the arm-pit. Now carry the bandage over the shoulder, across the back of the body, under the opposite arm-pit across the chest, over the shoulder and under it, bringing it up under the opposite arm-pit and again across the shoulder, always leaving one-third of the previous bandage exposed. Before putting on a shoulder spica you must place a large pad

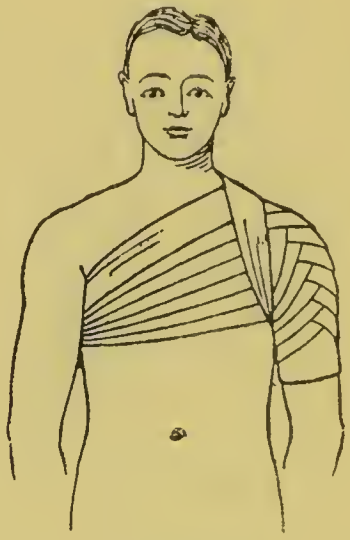


FIG. 12

of cotton-wool in the arm-pit on the injured side, a smaller one in the opposite arm-pit, and very often a wad of cotton-wool just over the breast-bone, which prevents the bandage from girting as it crosses the chest. This is a very pretty and effective bandage if correctly applied, the test being that the reverses and the turns of the spica cannot be distinguished the one from the other.

Vaccination Bandage (Fig. 13)

This is a deft little bandage which will prove of great use for children. Take a bandage sufficiently broad to cover the entire dressing of the vaccination, and split it at either end to within 3 in. or 4 in. of the centre. You now have a four-tailed bandage. Place the centre of the bandage over the dressing, carry

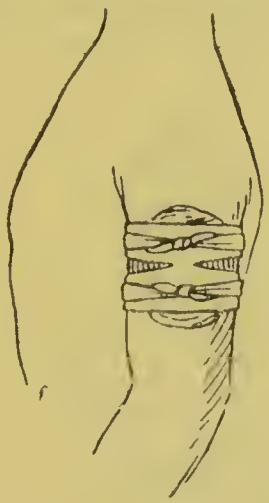


FIG. 13

the two upper "tails" round the arm and back again, tying off in a convenient spot where the knot will not cause pain. Do likewise with the lower "tails." This bandage will not slip as the spiral one will persist in doing, however well it may be applied, if the child is fidgety.

CHAPTER IV

BANDAGES FOR THE TRUNK

Clavicle (Fig. 14)

THERE are several ways of bandaging a fractured clavicle (collar-bone) with the roller bandage, but I will give you the two most

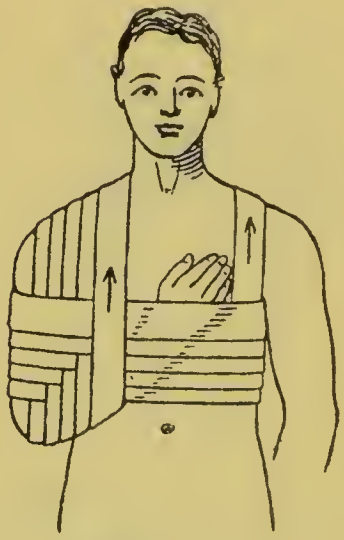


FIG. 14

popular methods, which should be quite sufficient for all your needs. Wood's method, which Mr. Cantlie favours, I give first. Place a large pad in the arm-pit of the injured side and a smaller pad in the opposite arm-pit. The object of the clavicle bandages is to press the elbow close to the body on the injured side and

also to support and to draw it backwards. The bandage should be 3 in. or 3½ in. and 14 yd. long. The arm must be flexed with the hand lying upwards on the breast. Apply the outside of your bandage to the inner side of the right arm for injured right clavicle just above the elbow and take a couple of turns in order to secure it. Carry the bandage round the back of the patient (never walk round a patient if you can possibly avoid it, but manage by passing your bandage from hand to hand), and bring it in front of the right hand at about the level of the wrist. Pull well on your bandage whilst you do this so as to get the arm on the injured side well back. Carry the bandage over the right elbow across the back, obliquely under the left arm-pit, over the shoulder, and obliquely across the back until you reach the right elbow; take it sharply under the right elbow and carry it in a vertical line up and over the injured shoulder. Now let it cross the back, pass under the left arm-pit, and once again pass over the right elbow. Repeat these turns until you have covered the injured shoulder. The test that you have this bandage on correctly is that you will have formed a St. Andrew's cross at the back. You must also put a pad of cotton-wool in between palm of the hand and the chest before commencing the bandage. At each turn of the bandage you must expose one-third of the underlying bandage. This is not an easy bandage to remember, but once you get it started it will go on easily and quickly. Remember that it starts round the arm on the injured side, and crosses the back, passes *under* the arm-pit on the uninjured side and then crosses the back to pass under the elbow of the injured side, and up over

the injured shoulder. Directly you get as far as that you have practically surmounted all difficulties.

Clavicle, Second Method (Fig. 15)

This is another excellent method of bandaging a fractured clavicle. Put a pad in the arm-pit on the injured side, take a couple of turns round the arm on the injured side (right), pass the bandage round the back and bring it

FIG. 15

forward over the raised fore-arm of the injured side, across the right arm, up the back to the uninjured shoulder over which it passes. Repeat these alternate turns. You must be careful to always bring the bandage which crosses over the shoulder and under the elbow of the injured arm, immediately under the tip of the elbow so that it gives support.

Double Clavicle (Fig. 16)

This bandage is sometimes used for young people who are inclined to be round-shouldered as it is an excellent method of drawing their shoulders back and making them upright. It is also used in the case of a double fracture of the clavicle. It is simply a figure-of-eight bandage, pads of cotton-wool being placed in both arm-pits. Stand at the back of your

FIG. 16

patient. Pass your bandage obliquely over the shoulder, round that arm-pit, cross the back and go over the opposite shoulder under the other arm-pit which you encircle; again cross the back and repeat. The front view of this bandage looks as if the patient had simply put his arms through two reins such as children use in their games.

Breast (Fig. 17)

Start with free end of your bandage under the affected breast and carry it round the body, being careful to travel across the body and under the arm on the *uninjured* side. Bring it up on the uninjured side and carry obliquely up to the shoulder on *uninjured* side, supporting the breast as you go. Alternately

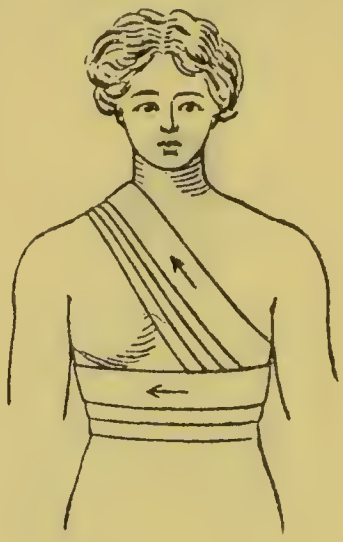


FIG. 17

encircle the body and the chest, each turn covering the breast gradually, working from the centre of the body (breast-bone or sternum) across the injured breast to the arm. Dressings of lint or wool on the breast must be arranged large enough to protect the whole of that side of the chest.

Double Breast

When both breasts have to be bandaged the most satisfactory method to follow is to bandage each one separately. The other and

quicker way is to cover one breast up, and with each alternate turn to pass over the opposite shoulder and come downwards to the waist, thus covering the second breast.

T Bandage (Fig. 18)

This bandage is very simply made and is used for keeping on dressings between the

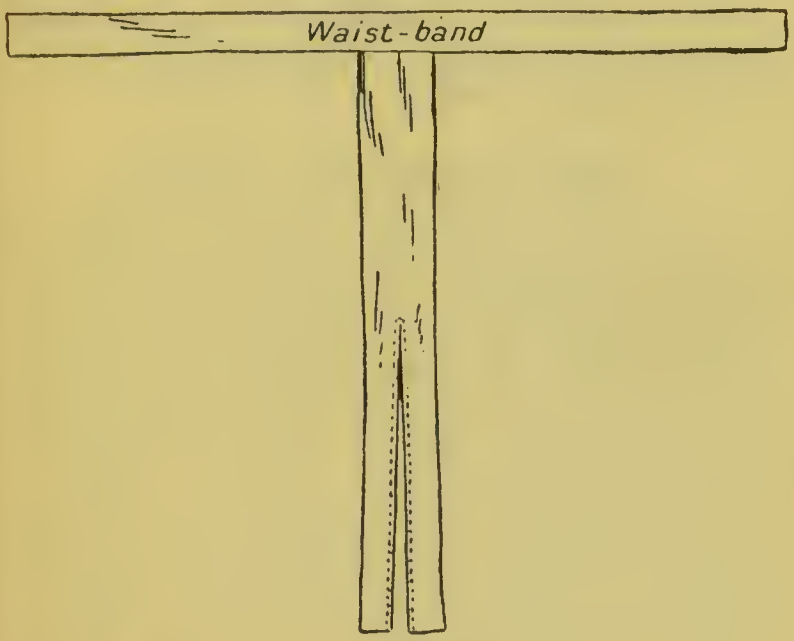


FIG. 18

thighs. A single strip of calico or flannel forms the waistbelt, and to the centre of it is sewn, very neatly, a vertical bandage which is split up from the further end to within 15 in. of the waist-band. A better plan than splitting up the single-tail bandage, which should be some 5 in. wide, is to lay two 3 in. bandages together, the overlapping edges

being about 1 in. apart. These should be herring-boned down for 15 in., and then the tails will be allowed to fly apart. When the bandage is made in this way it is much stronger, as the split ends are apt to slit up to the very top when in use. This is the quick way of making a T bandage, but they can also be made of flannel or calico with a flat single hem all the way round, which is herring-boned or stitched down. You must be careful when making these bandages to keep the edges very flat and even, or they may cause the patient some discomfort.

Many-tailed Bandages (Fig. 19)

To make a many-tailed bandage, which is used for abdominal wounds, you will require either white flannel or unbleached calico cut into five strips of 62 in. in length and 4½ in. in width. These five strands you must lay one upon the other, each one half overlapping the lower one, and in the very centre of the tails herring-bone them down over the space of 4 in. on either side of the middle, thus making what is known as the Base (8 in. wide and about 11 in. in depth). Sometimes a square of material is used as a Base and the strips of flannel sewn on to it. Two narrow strips, 25 in. in length and 2 in. in width, are sewn to the lower portion of the Base, as will be shown in fig. 19. These may be used as stirrups to pass between the thighs or over the shoulders as occasion requires. In applying the many-tailed bandage, place the Base under the patient's back and draw the two *lowest* ends forward, crossing them upwards on the abdomen. Use all the strands in rotation, thus making a herring-bone pattern up the

centre of abdomen. Secure with pins where necessary.

It is exceedingly important to remember how the many-tailed bandage is rolled, as a great

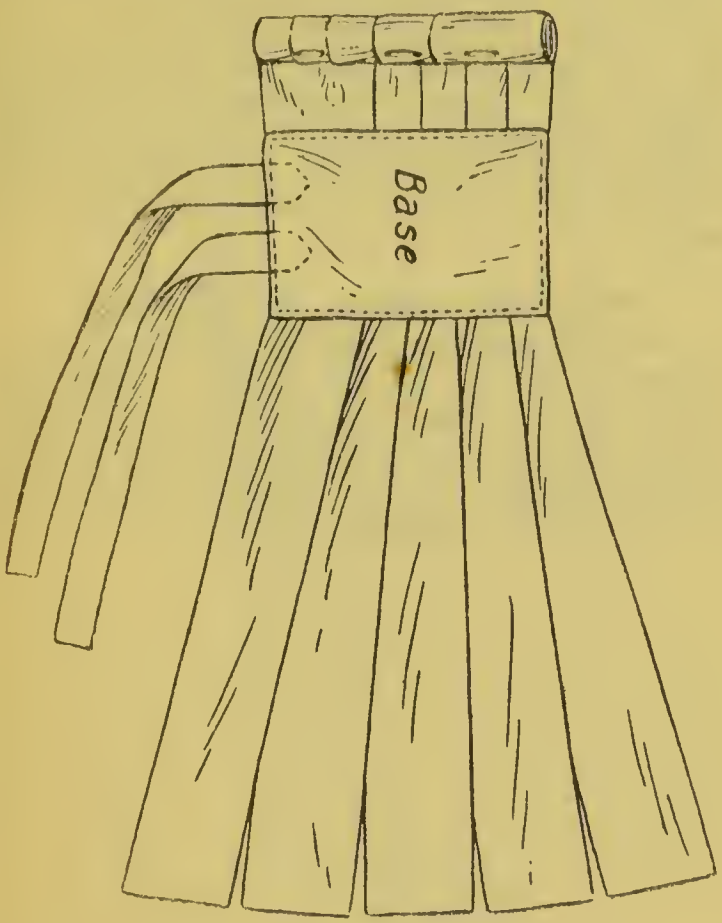


FIG. 19

deal of time would be lost by the nurse if she had to re-roll each bandage before she could use it. Lay the bandage flat on a table with all the tails arranged one above the other for

their whole length. Take a piece of brown paper exactly the width of the bandage when the tails are laid in position, and upon this paper turn over the ends of the tails and roll towards the centre, where you fasten with safety-pins. The stirrups should have already been folded backwards and forwards against the inner side of the Base, so that when both ends of the bandage have been rolled to the centre and pinned you will have a perfectly neat parcel. The object of putting in the paper is to prevent the ends curling up very much.

Many-tailed Bandage for the Thigh

A many-tailed bandage that is made precisely in the same way as that shown above, only smaller, is occasionally used to keep a dressing on the thigh. You can make it with as many tails as you like, but five, six and seven are the usual numbers employed.

CHAPTER V

LOWER EXTREMITIES

Foot and Leg (Fig. 21)

THE principle of bandaging the foot is precisely the same as that for the hand. Prop

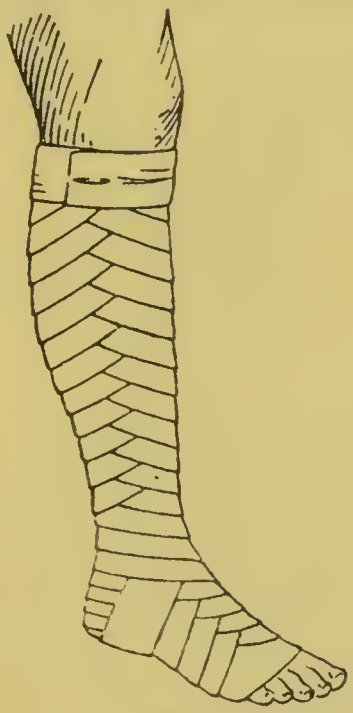


FIG. 20

the heel of the injured foot (if the heel itself is not injured) on something high enough to enable you to get at the foot easily. Stand

immediately in front of the toes, lay your free end of the bandage on the inner side of the right foot, carry it slantwise across the instep, and round the foot so that it shows the root of the little toe-nail. Bring it up on the big-toe side, carrying it over the foot to behind the outer side of ankle, just above the heel. Bring it forward and across the foot, passing it under the sole and behind the ankle alternately. Continue doing this until the foot is covered, always exposing one-third of your bandage. If the foot is a large one, you may find that it is a good plan to make a couple of spirals or

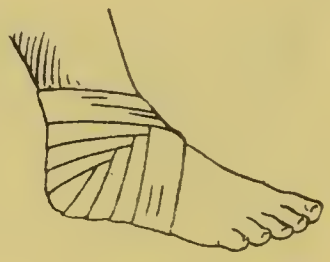


FIG. 21

reverses on the instep before you begin the figure-of-eight round the ankle. When the foot is covered take two or three spiral turns round the ankle and then commence doing reverses up the leg as far as the knee, where you secure the bandage with a safety-pin.

To Cover the Heel (Fig. 21)

Unless the heel is injured you never cover it in when putting on a foot and leg bandage, and again let me remind you that you should never put on a leg bandage without first covering the foot. To cover the heel you do exactly

what you do when you cover the elbow with a diverging bandage. Take your bandage from within outwards over the tip of the heel, and each succeeding bandage is taken on either side of the tip, taking it first below the point of the heel and then above the point of the heel, and so on until you have covered in the whole of the heel.

Knee Bandage (Fig. 22)

This bandage again is practically the same as that for the heel, the knee usually being

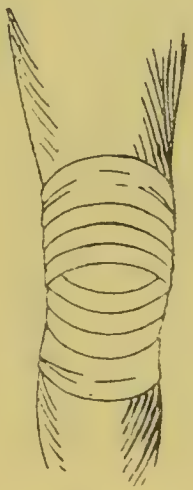


FIG. 22

flexed before the bandage is applied, just as is the elbow.

Spica on the Hip (Fig. 23)

This is a very useful bandage for keeping a dressing on the thigh, and is quite easily put on. Place the free end of your bandage on the inner side of the thigh high up, and take it

round the thigh once. Carry it upwards round the back of the waist, across the abdomen, round thigh, and again upwards round the waist and so on until you have covered in your dressing, taking care to fasten off where the patient will not lie on the pin. This spica is sometimes put on as a *descending* bandage, the first turn then being taken round the abdomen and then round the thigh and up

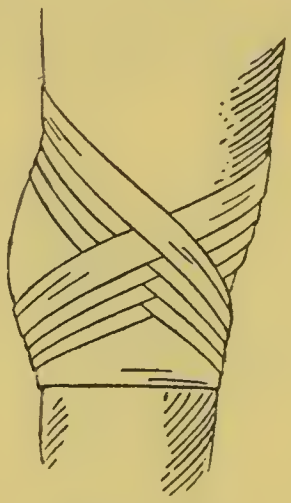


FIG. 23

again, working from above down instead of upwards.

Double Spica on the Groin (Fig. 24)

Use a bandage, 16 yd. long and 2½ in. wide. Stand in front of the patient and lay the outside of the bandage against the inner side of the right thigh. Pass it up over the right hip, and round to the front of the left thigh; pass it between the thighs, under the left

thigh and up across the abdomen, round the waist, over the right hip and again between the thighs, this time encircling the right thigh. Continue this movement, encircling each thigh alternately until you have covered in the

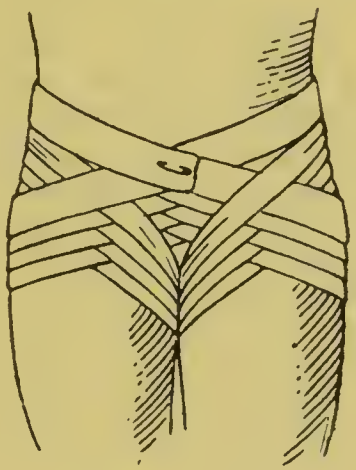


FIG. 24

dressing. Each turn must be higher than the last one, and you should expose one-third of the lower edge of the bandage. Be careful to put the pin where it will not hurt the patient.

CHAPTER VI

GENERAL HINTS

Padding Splints (Fig. 25)

It is very important that splints should be correctly padded, as they are worse than useless if badly made. No good nurse or doctor would use badly padded splints; but the danger is that they might possibly (in war time) get into the hands of the inexperienced and would then do the patient injury. The correct materials for padding splints is tow, very well teased out, and unbleached calico, but you can use a layer of cotton-wool if you prefer, which helps to keep the surface of the splint absolutely smooth. The surface *must be level* and smooth and *the edges must be well padded.* These are the two essential points to remember. An easy method is to lay the teased-out tow on the splint, covering it with the calico, taking care that the edges are well padded as you turn the calico over them. You may place a layer of cotton-wool fluffed out (if you like) next to the calico. Turn a narrow fold of the calico in on to the padding all the way round, and catch it across and across very neatly with herring-bone stitches. The ends are now turned in mitre-shape and neatly stitched at the corners and your splint is finished. With a little practice you will get the upper surface absolutely smooth, well rounded edges, and a perfectly flat back. Soft old linen is ideal for the covering of splints. They should never be padded entirely with cotton-wool as it has not sufficient spring in it.

Finally the splint should be covered in precisely the same manner with pink mackintosh (jaconet), so that it may keep clean and dry when in use.

Gauzes.—Plain white absorbent gauze, iodoform gauze, cyanide and double cyanide gauze.

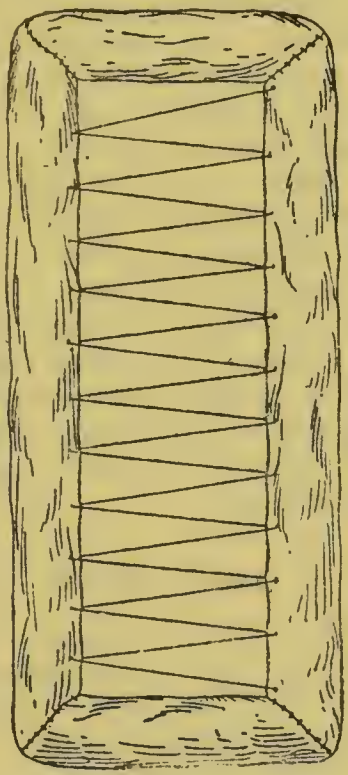


FIG. 25

BACK VIEW OF A FORE-ARM SPLINT

The cyanide gauzes are of a purple-bluish colour.

Lint.—Plain white lint and boracic lint, which is pink in colour. Flannel is used for body bandages sometimes, especially for rheumatism.

Never allow two uncovered surfaces of skin to meet. Always put pads in arm-pits before bandaging. Always place pads at the "pressure points" of splints where they might rub and cause a sore. Always place a large pad of cotton-wool or other dressing over the whole of the breast before bandaging. Never place a roller bandage against the skin with no dressing between; the perspiration from the skin, having nothing absorbent against it, may cause tiny sores and irritation.

Always make the reverses of your bandages come on the outer aspect of the limb, that is the thick, muscular or "fleshy," slightly to the outer side of the central line of the limb.

Finish each bandage off very neatly. A very neat method, followed by one of the great hospitals, is to mitre the end by quickly folding the sides to the middle and turning under and then inserting pin in lengthwise from the apex. Always place limb in desired position before beginning to bandage.

A LAST WORD

Be proud of a roller bandage which shows an exact pattern, has even pressure and is neatly finished; but be more proud still of having put on a bandage which the patient tells you is "really comfortable."

Recollect that the real patient is not a lay figure, nor a robust model, but one who has suffered injury of one kind or another. Therefore, whilst remembering all the "principles" of bandaging, your first and last thought in all branches of nursing must invariably be the comfort of your patient.

INDEX

A

B

C

D

E

F

G

H

I

J

K

L

M

P

R

S

T

V

W

LIST OF ILLUSTRATIONS

PART I.—TRIANGULAR BANDAGING

PART II.—ROLLER BANDAGING